The SOLA Model: A Theory-Based Approach to Social Quality and Social Sustainability

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Abstract

Sustainability is frequently discussed with reference to the “3-pillar” model distinguishing ecological, economic and social sustainability. However, *social* sustainability is treated as a residual category without adequate theoretical conceptualization. As a consequence, we find a wealth of approaches and models proposing a wide range of social indicators on individual and collective levels, both subjective and objective. While this diversity is fruitful given the range of social sciences involved and the diversity of social issues and social policies, communication between approaches and comparison of results is hindered by the lack of a common framework. The SOLA model offers an interdisciplinary, multi-level and comprehensive framework or meta-model structured by five modules (human ecology, 3 levels of social systems, ethical quality standards) which conceives social sustainability, social quality and quality of life in terms of evolving systems theory. We argue that the meta-model can facilitate systematic comparison of different approaches, bridge the gap toward natural and engineering sciences, and guide the development of social indicators. More specifically, two social indicator profiles are proposed to capture the divergence between two competing approaches to social sustainability: the social quality approach and the social capital approach. The focus in this article is on the presentation of the model and on conceptual issues of social sustainability and social quality. The model is based on an extensive review of alternative approaches. It is empirically validated in quality of life research in social and health care, and applied in on-going research on inclusive social policy.

Keywords Social sustainability · Social quality · Quality of life · Social capital · Comparative framework

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1 Introduction: The Problem

Since the well-known definition of sustainability by the Brundtland-Commission (WCED 1987) the concept of sustainability has gained a prominent position in the political as well as scientific community. The concept has been enriched by new dimensions across policy areas and disciplines, but there still is no framework integrating the diversity of concepts and approaches (Stiglitz-Commission 2009; EQLS 2012, 2016; Eurofond 2014; OECD 2015a, b). A typical approach is the “3-pillar” model distinguishing environmental, economic and social sustainability and, in effect, treating “social” as a broad residual category. Colantonio (2011) has provided an overview on the state of the art of research and development on social sustainability in Europe. The overview places the concept in the context of “European Research on Sustainable Development” (Jaeger et al. 2011) and explores the linkages between research, policy and practice. While a valuable starting point, the contribution identifies at least six different theoretical approaches or perspectives, four examples of definitions of social sustainability, a list of about 35 indicators to be grouped into suggested seven dimensions, and a good-practice example from the city of Rotterdam containing four dimensions ordering 15 indicators. As Colantonio is well aware, this conceptual diversity is desperately in need of theoretical structuring, not in order to legislate one meaning for the concept or to restrict the exploration of empirically and practically relevant indicators, but to guide further explorations more systematically and support interdisciplinary exchange.

A recent overview on “social investment for sustainable and inclusive growth” by Deeming and Smyth (2018) still concedes that the central concepts are insufficiently grounded in theory. They cite the OECD (2014) framework for policies for inclusive growth which is listing social factors (norms, institutions) among “other drivers”. Our contribution is addressing the community of social indicator research and this policy context of social accounting and social indicators with the aim to provide a practice oriented framework, however, with a focus on theoretical foundations. There are good reasons for research exploring a diversity of schemes for social indicators in view of changing needs of social policy. But this diversity also creates the need for an overarching “umbrella” facilitating the comparison between approaches and their results.

Therefore, the SOLA approach is both more and less ambitious than other approaches:

On the one hand, we propose the *SOLA approach*, i.e. a *conceptual framework* which is theory-based placing social sustainability into a systematic context of *other* dimensions of sustainability (e.g. ecological, economic) and supporting comparison and interpretation of existing approaches to *social* sustainability. The framework claims to be general enough to effectively mediate between different disciplines and theoretical approaches.

On the other hand, we propose the *SOLA model*, i.e. an instrument which is designed to order (not only) social sustainability indicators and to support social indicator development in research and social policy. However, we do not propose a complete “dash board” of indicators, but rather an integrated *reference model* which supports comparison and can be used to structure and generate sets of indicators. We believe that there is not one set of indicators satisfying all needs of policy and research in a rapidly changing world. Concepts and indicators have to be developed for more specific purposes and answer to more specific questions—without losing their theoretical grounding.

The present focus is primarily on central concepts, domains or dimensions of societal and social sustainability. As indicated above, we propose a conceptual framework and not an explanatory “grand theory”. Conceptual frameworks can have different objectives,

clarifying the conceptual basis and formal requirements of an explanatory theory is only one, though certainly important one. Other objectives may be to sensitize (Turner 2013) for philosophical presuppositions, relevant political issues and critical perspectives, and aesthetic, cultural or educational aspects. The SOLA development started with empirical research on quality of care and quality of life in social and health care. This resulted in an “umbrella” model of quality of life (QoL) suggesting a common framework for the diversity of current approaches (see below). For more on the theoretical foundations and first empirical investigations of this model, the reader is referred to previous sources (Vaarama et al. 2008; Vaarama and Pieper 2014). Now the perspective is broader on social sustainability and social quality as outcomes of welfare policies. A special interest of ongoing research is in developing an integrated, multi-level and inclusive approach to social policy (see: www.promeq.fi). We are aware that the SOLA model has to stand the test of empirical application. The model is based on an extensive analysis of previous social indicator models (Pieper et al. 2016), and is currently explored in empirical research using Finnish survey data. The results will be reported in following publications.

The *social quality approach* (SQA) receives particular attention because the SOLA approach (abbreviation for social quality in Finnish) is indebted to this approach, and we want to continue with the objectives of the European Social Model and the Social Quality approach (SQA) as initiated by Beck, van der Maes, Walker and others (see Beck et al. 1997; Van der Maesen and Walker 2012). However, their approach is placed here into a wider framework with a new interpretation. Due to the restrictions of this article, other important approaches are only mentioned in passing to indicate the scope of the model (e.g. the human development approach, the capability approach, quality of life models, and the production of welfare approach).

The argument will proceed in three steps:

First, we introduce the central concepts and the general architecture of the model.

Second, the model is presented in more detail to illustrate the different ways the model can be used in social indicator research.

Third, some of the theoretical issues are discussed which are crucial for the SOLA approach, including two suggested strategies focusing especially on social quality and social capital.

A short conclusion will sum up and place the SOLA model in a social policy context.

2 Central Concepts and the Architecture of the SOLA Model

Let us first establish the basic structure of the SOLA model. We suggest building the model up in levels (rather than with pillars) from an ecological base arguing for an evolutionary development of society. A “classical” starting point is the well-known definition of sustainability by the Brundtland Commission:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

The definition acknowledges that further development is necessary to meet the needs of the present. But this process has to be realised in a way that respects the

Fig. 1 The general SOLA model

“limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs”

(World Commission on Environment and Development (WCED 1987, p. 43).

The definition refers to a general setting for societal development: the human ecology (Duncan and Schnore 1959; Hawley 1950, 1986; Turner 2013). Basic elements are: the world’s *population* with a developing state of *science&technology* in changing forms of *social organisation* and a limiting capacity for the *natural environment* to sustain meeting of needs. *Social sustainability* should be understood as part of this general concept of societal change in interdependence with ecological change. The “social dimension” (or “pillar”) should be integrated with other dimensions and avoid disciplinary fragmentation. This suggests taking as the base of the model a level of *human ecology* which combines the four elements above (environmental resources, population/demography, material culture/technologies, and space–time connectivity/geography). Note that the human ecology model is slightly modified by distinguishing within “social organisation”, on the one hand, the connectivity as constituted by space–time and technologies and, on the other hand, social organisation in a broad sense of society or the “social universe” (Turner). If needed, we can differentiate this level further, e.g. by distinguishing living or biological and physical systems following, for instance, the evolutionary levels from James G. Miller or Kenneth E. Boulding (see Turner 2013).

For the present purpose, it suffices to include the interface of society to the ecological level as the first module in our model (see Fig. 1).

Table 1 The diversity of dimensions in frameworks of sustainability

Social indicator models see references	Dimensions
Daly (1973, 1996)	Ecological, economic, social
Colantonio (2007, 2011)	Socio-environmental, socio-economic, institutional
Maggee et al. (2013)	Ecological, economic, political, cultural
Bericat and Jiménez-Rodrigo (2015)	Socio-economic resources, social/cultural/political participation, social equality/inclusion, health/criminality/safety/rule of law
OECD (2014)	Natural capital, economic capital, social capital, human capital, individual well-being
EUSI (2018); Noll (2002)	Natural capital, human capital, social cohesion (social exclusion, social capital), QoL (objective living conditions, subjective well-being), demographics, values/attitudes
Van der Maesen and Walker (2012)	Social security, social empowerment, social inclusion, social cohesion

In a next step, we have to introduce the level of society. In evolutionary terms, this is the level of symbolic social systems. An important feature of the SOLA model is the explicit distinction of *three levels of society*. Usually, the level of society is combined with or includes only an individual level. The European System of Social Indicators (EUSI), for instance, distinguishes quality of life (QoL) of individuals from a broad concept of social cohesion (EUSI 2018; Noll 2002). The SOLA model reflects a basic assumption of the theoretical foundations, namely, that a level of processes mediating *between* the level of societal structures and the level of individuals has a crucial importance for the (concept of) sustainability of society. In view of current societal structures, it should be obvious that we do not want to sustain current structures. We want to sustain the capacity to *develop* structures with certain qualities corresponding to our vision of a “good society”. And we don’t want to sustain current individual quality of life, certainly not existing inequalities, but the capacity of society to ensure a “good life” for all. The quality of the processes mediating between structures and individual ways of life are crucial for a sustainable society.

To direct the attention of social policy to the level of processes the SOLA model distinguishes (at least) three levels within society: societal capitals, social quality processes, and individual quality of life. This accounts for another 3 modules of the architecture.

On the level of society, we have to introduce, in some way, the distinction between economic and social dimensions (or pillars), but the distinction has to be made within a coherent concept of society assigning both dimensions a proper place. A selection of approaches in social indicator research demonstrates—see Table 1—that current models chose quite different ways to partition society into dimensions. Next to the ecological and economic dimensions, the social dimension is further divided, e.g. by political and cultural dimensions (The Circle of Sustainability, Maggee et al. 2013), and the individual level of quality of life (QoL) is added, e.g. in the European System of Social Indicators. The confusion in central concept of societal sustainability, we believe, is largely due to the theoretically ill-founded distinctions and combinations of “social” relations into dimensions or categories. A basic mistake is to confound life *domains* (e.g. work, leisure, political activities, housing) with theoretically grounded *dimensions*, a problem also plaguing QoL models (Pieper and Vaarama 2008). Domains follow the structure of everyday life and can differ substantially between societies. If we are searching for a framework to *compare* societal or individual qualities, we need a more abstract set of

dimensions. The distinction of *four* dimensions (economic, political, cultural, social) with a specific theoretical foundation is a central feature of the SOLA model, and we have to come back to this foundation in Sect. 4. At this point, we only emphasize that the four dimensions need to have a very general or abstract character, since we want to use the *same* dimensions to compare *different* theoretical approaches (and their distinctions of dimensions) as well as apply our dimensions *across all levels* including the natural environment and technologies. This way, we are able to use our model as a common ground in interdisciplinary communication reaching out to non-social sciences.

The strategy itself is not new; we apply here a general systems framework and propose the SOLA model as a *meta-theoretic model*. The special features of the model are in the ways we design the model and link the general framework to the conceptual level of societal sustainability, social quality and quality of life and to the empirical level of social indicators. Introducing the perspective of general systems theory opens the conceptual framework to very powerful theories and models in cybernetics, system theory, complexity theory, decision theory, or organisation and management theory. The benefit from our present perspective is not only the richness of these approaches, but especially their interdisciplinary character. This does not mean to reduce striving for sustainability to a technological problem. The goal of a sustainable “good society” is not an authority dictating the implementation of “best practices”, but is itself subject to co-evolution. Societal sustainability should not be understood as simply sustaining present societies and their structures, organisations or ways of shaping personal lives. The societies and life styles compatible with our visions of the “good life” and the “good society” and with ecological futures have to be discovered.

Finally, the SOLA model includes explicitly a normative level of “objective” values or ethical principles and “true” scientific knowledge. While the level of human ecology provides a frame from “below” delineating the natural boundaries for society, the normative level provides a frame from “above” by defining the standards for the evaluation of society as (more or less) “good society” enabling a “good life”. The SOLA model explicitly introduces this normative level—called objective, transcendental, or telic by different authors (see below)—to distinguish it from the cultural traditions, values, laws and social norms of current societies. This level clearly needs some explanation, and we return to it in Sect. 4. At this point, we want to emphasize two aspects that are central for the SOLA approach and guide the design of the model:

First, essential concepts like quality of life, sustainability and social quality require standards for evaluation. They are normative concepts that in practice are too often delegated to “the policy makers” for specification. But they are also highly complex concepts and require not only expertise in ethical or philosophical issues, but also the application of our best knowledge to explicate what it means implementing “*human dignity*”, “*freedom*”, “*social justice*”, “*equity*”, or “*solidarity*” in the practices of everyday life and ensuring them by favourable conditions and opportunities in society. These are the “universal” ethical principles, values or “varieties of goodness” (Georg v. Wright) included in the SOLA model. Reference to our “best knowledge” introduces another normative concept, obviously. It only demonstrates that the normative issues cannot be solved by a supposedly “value free” consensus in science. Our “best knowledge” is part of our vision of the “good society” and of our best understanding of sustainability. As the discussion on climate change makes terribly clear, we have not even a way of knowing for certain that we have not already reached a current state which is unsustainable, beyond a threshold, and even without options for a sustainable future (Fleurbaey and Blanchet 2013, p. 47). Concepts of *societal quality*—measuring and evaluating the

current state—acquire a priority over the assessment of *societal sustainability*, since future trends are characterized by uncertainty, not the least because of rapid technological and social change. This shift in priority implies that we have to pay special attention to the dimension of *time*, i.e. individual and social change and development, to avoid static stability models.

Second, the normative level is crucial to the preference of the SOLA model for an *action theory* framework whenever social relations and processes are described in more detail. The concepts of social action, social practice and responsible agency are closely linked to value-orientations. They encourage the reflection on normative implications, and they take the perspective of collective action in social policy. In other words, they take the perspective of mediating processes assumed to be essential for societal sustainability.

Before we assemble these basic elements in the description of the SOLA model, we should add that the assumption about the central role of the intermediate level can be interpreted in two ways. A rather strong assumption will single out the social quality of mediating processes and their interdependence as essential for the evaluation of societal quality and societal sustainability. We will refer to this position as the *strong strategy* operating with the concept of *social quality*. A weaker assumption will accept the importance of the intermediate processes, for instance in terms of a *meso* level distinct from a structural *macro* level and a *micro* level of individuals and/or households. This weak strategy will treat the relative importance of levels as varying in different societies and consider *societal quality* as an overarching concept. As we will see, this perspective tends to favour the concept of *social capital* to describe the “social dimension”. The SOLA approach supports both strategies and distinguishes them in the model (see the ellipses in Fig. 1).

3 Defining the SOLA Model

Assembling the modules introduced above, we obtain the general SOLA model in Fig. 1. The model consists of five basic modules: the frame of value standards, the frame of human ecology, and the societal level in between, i.e. the structural level, the mediating processes, and the level of individual QoL. The three social levels are arranged horizontally, because they also may be interpreted as a “flow model” or a strategic model for the production of social welfare with the structural level providing the condition for intermediate social processes which, in turn, produce QoL as the ultimate outcome (Vaarama et al. 2008).

The structural level (institutions, capitals), the process level (collective actions, interventions) and the individual level (living standard, subjective well-being) are differentiated “horizontally” by the same 4-dimensional framework. The dimensions correspond to four general functions: in case of society to the economic, political, cultural and social dimension (or “pillars”); in case of processes to security, empowerment, inclusion and cohesion; in case of the individual to four dimensions of QoL. They are conceived in the model in a way that allows for generalising them to the normative level and the level of human ecology (distinguished in digital version of SOLA diagrams by specific colors). We come back to this feature in Sect. 4. This facilitates systematic analyses and comparisons *within* a dimension as well as *between* dimensions and *across* levels.

The *frame of value standards* is explicit in the model, but not discussed here in detail. Human dignity or respect are considered as overarching value standard. The values introduced here reflect especially the 4-dimensional “The Varieties of Goodness” as described

elsewhere (von Wright 1963; see Vaarama and Pieper 2014). Similar values are included in the Social Quality approach (Van der Maesen and Walker 2012, p. 65). An empirical approach to human values compatible with the SOLA model and applied to the European Social Survey has been proposed by Schwartz (Cieciuch and Schwartz 2018; Davidov et al. 2008).

The *frame of human ecology* follows the model by Duncan and Schnore (1959). It can be further differentiated within the SOLA model to accommodate a wide scope of environmental indicators (Pieper et al. 2016). This is facilitated by the system theory approach which allows for the alignment of ecological frameworks.

The model allows us to assign more precise meanings to central concepts in the debate on social sustainability. For some concepts we will give a more formal definition. Meanings deviate somewhat from the use of other authors, but as we have seen, there is not yet a consensus on terminology. The proposed definitions below are consistent within the SOLA framework. The main concepts are *societal sustainability*, *social sustainability*, *societal quality*, *social quality*, *social capital*, and *QoL*. As we see in Sect. 4.1, *social integration* is used as a general term for the social dimension or function in social systems. The concept of *social sustainability* should be reserved for the analysis *within* society, while *societal sustainability* refers to the relation to ecological sustainability. The concepts of *social security*, *social empowerment*, *social cohesion* and *social inclusion* are used here in a narrower sense than, for instance, in the context of EU policy where a very broad concept of cohesion is used. The reason resides in their distinct role in the *social quality* concept and its focus on the level of mediating processes. *Social capital* will be introduced as concept of social integration.

The vertical ellipse in Fig. 1 highlights the crucial mediating processes constituting social quality; their efficacy determines societal sustainability. The horizontal ellipse indicates the special role of social integration in the model, associated frequently with social capital.

Definitions:

Societal Sustainability refers to the capacity of societies for co-evolution with their ecological environment guided by objective knowledge and justified values essential for human growth.

Monitoring societal sustainability we distinguish between a “*strong*” and a “*weak*” strategy:

The strong strategy makes the (strong) assumption that *social quality* describes the capacity mediating between the QoL of individuals and social institutions by producing, reproducing and sustaining social quality over time.

The weak strategy uses the concepts of *social sustainability* and *social capital* measuring the social integrative function. This strategy monitors societal sustainability by comparing indicator profiles in all four general functions (economic, political, cultural, and social).

Societal Quality Refers to the extent to which a society has achieved standards of quality on all four general functions (economic, political, cultural, and social).

Social Sustainability refers to the capacity of social systems or societies to produce social integration. This capacity can be measured as process producing loyalty, trust, socio-emotional bonding, or social capital (in a broad sense; see Sect. 4.1).

Social Quality refers to the extent to which processes in society have the capacity of mediating between its members and its institutions in all four functional dimensions.

Social quality is an achievement based on the performance of four processes evaluated by quality standards and defined as:

Social Security ensuring access to goods and services and productive participation in exchanges and transfers (e.g. on the labour market, as entrepreneur, in households, or as consumer); focus on access to resources and environmental quality

Social Empowerment ensuring opportunities (e.g. through good governance) and enhancing capacities to influence decision making and to effectively achieve goals: focus on health, skills, knowledge, autonomy, and distribution of power

Social Inclusion ensuring human and social rights, equity, and the rule of law while respecting cultural diversity and enhancing responsible pursuit of personal and collective aims: focus on values, rights and tolerance, social identity and responsive institutions

Social Cohesion ensuring solidarity, caring relations (e.g. within and between generations), trust and cooperation, and the engagement and expression of self: focus on trust, loyalty, commitment and emotions

From the perspective of the individual, the four processes refer to *capabilities*, i.e. abilities with a corresponding enabling social context.

From the perspective of society, they relate to types of assets (“capitals”) supporting and encouraging participation in all domains of society.

From the perspective of mediating processes, they are related to different types of interactions, social practices, and social mechanisms each under the influence by a specific code or medium coordinating activities, i.e. money, power, meaning, and trust, respectively. The codes will find their expression in social groups, organisations or institutions on all levels, e.g. as economic organisations or ethnic groups (see Sect. 3). For the concept of social quality, however, the performance on intermediate levels is of special importance.

Social Quality refers to the 4-dimensional mediating process in the centre of the model in Fig. 1. Given appropriate indicators, the “good society” will show a “perfect performance profile”—more realistically, a comparative study will show societies to perform better or worse across the profile.

Since mediation is the central focus of social quality, indicators should measure primarily the efficacy or performance of processes. These processes can be expected to be especially important in *transitions*, i.e. in coping with change either on a structural or institutional level or over the life course due to changes in social position (e.g. transition between social classes, age roles) or life events related to e.g. health, unemployment, family, or migration (Kvist 2018).

In practice, the selection of appropriate indicators will have to make compromises by measuring individual outcomes (e.g. QoL) or structural conditions (e.g. investments in social policy) or perceived social quality. Another option is the measurement of service qualities designed to ensure the functions (for social and health care services see Vaarama et al. 2008).

The definition of societal sustainability suggests two different strategies, following the strong or the weak concept. The “strong” strategy follows the SQA in assuming the crucial role of the mediating processes and defining normative standards of social quality. Obviously, this strategy will opt for a close relationship with social policy committed to the social quality goals indicated by the four dimensions. It also will interpret QoL measures in terms of flourishing or human growth in favourable conditions. The “weak” strategy will aim for a comprehensive set of indicators and adopt—following the SOLA model—a meta-theoretical 4-dimensional framework. The strategy will define and measure social

integration in a profile across all levels and complement it with profiles on economic, political and cultural indicators. The strategy will be adopted typically in a perspective on explanatory and empirical issues leaving normative issues to policy. “Horizontal” analyses across levels will tend to follow disciplinary interests, as in the case of economic research or social capital research. Comparative research between welfare regimes will focus on “vertical” profiles on the structural level, e.g. comparing welfare regimes in the tradition of Esping-Andersen (1990).

The SOLA model incorporates a meta-theoretic QoL model (Fig. 2). The model has a “vertical” focus on the outcomes of social policy. The model employs the four dimensions on the level of the individual, and depicts the individual QoL as nested in two social levels to emphasize how QoL is contextualized by the model (Vaarama and Pieper 2014).

Definition

Quality of Life (QoL) is the extent to which persons enjoy a good life by achieving a balance in their relations with themselves and with others through creating and sustaining adequate conditions and own potentials over the life course.

The definition emphasises a number of aspects: Reference to the achievement of persons recognises active and reflective agency vis a vis other persons. The concept of “good life” acknowledges explicitly the necessarily normative character of QoL, while balance accepts that no objective “golden standard” exists and that there is a need to adjust criteria to specific and changing conditions (e.g. culture, disability, age). Relations to others highlight the social dimension and the social context. Condition and potentials reflect that QoL is achieved under external challenges and opportunities, but also draws on learning, creativity and personal growth. In as much as own potentials depend on opportunities with choices, this concept corresponds to the capability approach (Nussbaum and Sen 1993; Nussbaum

Model of Quality of Life, Social Quality and Societal

Fig. 2 The general QoL model in the context of SOLA model

2011). A life course perspective makes aware that QoL is subject to individual and societal developments and extents over time.

The balance may be experienced in relation to

- (a) the material environment as access to sufficient resources (positive) or as uncertainty and risks (negative),
- (b) the social environment as shared meaning, values and relations (positive) or as anomie, lack of orientation and rejection (negative),
- (c) personal capabilities as competence and efficacy (positive) or as lack of control (negative), and
- (d) the emotional base as joyfulness and peace (positive) or anxiety, existential threat or depression (negative).

Additionally, the current state can be seen in relation to

- (e) development over time as growth (positive) or stagnation or regression (negative) compared to a “normally” or “ideally” expected development. Here the perspective of an individual life is linked to concepts of social quality and sustainability and the normative standards set by social policies.

The observant reader will notice that the QoL model contains a special use of the term “social”. Social relation are here aligned with social inclusion, since social relations are considered from an individual perspective as giving value, meaning and social identity to a person. The term “social” picks up the use from the environmental QoL model of P.M. Lawton and of the WHO-QoL model distinguishing “environmental” (including resources, access), “social” (meaningfulness, relations), “physical” (health, skills, abilities), and “psychological” (affects, mental health) dimensions (Pieper and Vaarama 2008). The integrative function refers, in turn, to the affect regulation or emotional well-being achieving inner integration and integrity. This again links nicely with the emotional commitments involved in social cohesion and trust. As indicated in the centre, subjective well-being of the “mind” is included in the model within the same framework (see Diener 2009). Correspondingly, basic needs can be introduced as underlying level relating to the “body” (see Sect. 4.2).

The model has been developed in the context of care as “care-related QoL”, but as “context-relating QoL” it can be applied to other contexts as well (Vaarama and Pieper 2014, p. 4). As indicated above, the model also incorporates an explicit reference to the normative aspect of quality or “varieties of goodness” (von Wright 1963). For present purposes, we want to point out the meta-theoretic character of the SOLA model of QoL providing an umbrella framework for different QoL models, subjective and objective, accommodating empirical research using different instruments and indicators.

The SOLA model can be used as a *heuristic methodology* in different ways. The main purpose is as a meta-model supporting systematic comparison between different conceptual frameworks. In this spirit, we look in the next section at social capital and social quality. As a meta-model, it can also be used to re-group social indicators from different models and to re-analyse and interpret empirical results. Studying lists of indicators from different approaches, we can re-organize them for comparison by sorting them into a table following the cells of the meta-model (in Fig. 1). We can inquire, for instance, if a dimension is missing or overrepresented. Typically, economic indicators

Table 2 Indicators of social quality

Social indicators for the four dimensions of social quality: examples

<i>Socio-economic security</i>	<i>Social inclusion</i>
Unemployment/employment security	Recognition of human rights of all citizens
Poverty rate/income sufficiency	Respect of rule of law
Homelessness/satisfaction with housing	Satisfaction with cultural services
Access/sufficiency of public services	Labor market inclusion/retirement
<i>Social empowerment</i>	<i>Social cohesion</i>
Education level	Trust in public institutions
Health problems/perceived health	Trust in other people
Access to information of public services	Altruism/helping others
Participation in health promotion activities	Social networks in living area

are overrepresented and indicators of cohesion are lacking. The SOLA model has been applied successfully to wide scope of social indicator tables (Pieper et al. 2016). The SOLA model, actually, offers a “dash board” of $4 \times 4 = 16$ cells (arranging human ecology vertically and leaving aside the level of value standards). Thus, due to the comprehensiveness and interdisciplinarity of the model, the ambitious claim of the resulting matrix is:

All sustainability indicators can meaningfully be placed into one of the slots of the SOLA “dash board”.

This claim has to be explained in the following section. It is like all such claims relative to the underlying theory. In practice, the matrix (and this claim) has more a heuristic and methodological value. Depending on research or policy interests, only a selection of factors will be relevant and practically feasible. Especially, the selection of more detailed indicators will be guided by the issue at hand. And to be sure, for each “cell” it should be shown that indicators are valid and reliable. Drawing on different sources in available Finnish data and in the literature—especially on research employing the SQA (see below)—we currently test a wide range of indicators in order to identify key indicators for the four SQA dimensions. Table 2 shows examples of indicators tested in an on-going project (www.promeq.fi). The indicators are selected here only to illustrate the *content* of the dimensions comprising objective indicators of regions as well as perceived qualities of living environments.

More modest than a “dash board”, the SOLA model suggests two different social profiles from the general model to measure social sustainability and social quality (see ellipses in Fig. 1):

- *Social Quality Profile*: a 4-dimensional profile combining performance indicators of the four mediating processes; this profile would characterise the functional efficacy of crucial mediating processes and measure social quality and social sustainability in the sense of the SOLA model. In a social policy perspective, this profile will have the role of measuring mediating factors in the production of QoL outcomes.
- *Structural Social Profile*: a one-dimensional profile combining indicators of social capital *within* the social dimension across levels. The structural profile should be assessed and interpreted in relation to economic, political and cultural profiles. The advantage is

that the profile gives the concept of social capital a systematic place in societal analyses. The objective profiles can be compared to QoL as perceived by individuals.

But the model can guide research in other ways. One important feature of the 4-dimensional framework is that it can be applied iteratively to further differentiate concepts, elaborate social policies, or define social indicators. This capacity derives from the fact that the four dimensions constitute also theoretical aspects under which concepts or indicators can be “framed”.

For example:

1. Social policy for vulnerable groups in society should address all four aspect of social quality with strategies at different levels. Although typically deprivations will accumulate in all four dimensions and in different ways for different groups, groups can be identified with their primary needs in certain dimensions and their profile on QoL instruments can be expected to vary accordingly. Vulnerable groups in social work and social policy are deprived in different ways:
 - unemployment has a focus on social security;
 - migrants are in need of inclusion;
 - older persons experience a loss in empowerment not only due to health, but also lack of enabling conditions;
 - young people often suffer from disrupted transitions to adulthood (youths without employment, education or training) by failed integration (cohesion).
2. We might also consider more specific issues in a 4-dimensional framework:
 - Social security implies access to income (security); aspects of inequality (inclusion); employment or employability (empowerment); and safety and integration at work (cohesion).
 - Social support networks are usually distinguished by providing primarily access to resources; social recognition and identity; information and cooperation; or emotional support.
 - Interventions for the integration of migrants will address e.g. security through employment; inclusion by ensuring their rights; empowerment by enhancing skills and language capacity; and cohesion by promoting social relations in the community.

The examples are all taken from the application of the SOLA approach in an on-going project on multi-level interventions for vulnerable groups (www.promeq.fi). The results are currently analysed and will be published in a subsequent article.

A number of points needing further elaboration have emerged in the presentation of the SOLA model. We take them up in the following section.

4 The Theoretical Background of the SOLA Model

The foundations of the SLOA approach draw on evolutionary systems theory and action theory providing the model with its meta-theoretic framework. The model architecture places the society between a level of human ecology and a normative level. The levels build up a hierarchical “scala naturae” already recognized by Aristotle and roughly corresponding to a hierarchy of disciplines ranging from natural systems (e.g. physics, biology), psychological and social systems to philosophy and ethics (symbolic or telic systems). Since any meaningful social policy addressing issues of sustainability has to follow an interdisciplinary strategy, the model reflects this architecture. It introduces a common ground for communication across disciplines. Structuring this common ground by five relative autonomous levels and four functions cutting across these levels aims for a transparent and elegant design, which should further facilitate communication. Additionally, we have distinguished two different strategies of dealing especially with the function of (social) integration associated with the concepts of social capital and social quality in the model and in need of more detailed elaboration.

In this final section, we take a closer look at each of these points: the emergence and distinction of levels, the nature of the four dimensions, and the role of social capital and social quality.

4.1 The Distinction of Levels in the SOLA Model

The five modules represent on closer scrutiny two different distinctions. There is the distinction between the framing levels of human ecology “below” and the normative level “above”, and the distinction between levels within society. The former distinction is of a more basic nature, while the latter is a case of making further distinctions which could also be introduced in other levels, e.g. within biological living systems. Let us consider first the step from human ecology to societal systems. The relation between these levels is construed differently and occupies a central place in philosophical debates (e.g. Habermas 1984, 1987, 2012; Dreyfus and Taylor 2015). For present purposes, we need not to engage in this discussion, but accept the prevailing narrative of science and philosophy stating the crucial importance of this step based on the evolution of symbolic media or language.

Human sciences strive to understand the “architecture of complexity” (Simon 1973), and we may nourish hopes that all levels and their interaction will eventually be explained within one “grand theory”. But as it is now, all schemes to reduce the complexity to one level either from below (naturalistic reductionism) or from above (constructivism) have not been convincing. Moreover, there are good arguments suggesting that the world is characterised by emergent levels that force us to introduce new concepts, which cannot be explained with concepts from lower levels (Wimsatt 1999, 2006; El-Hani and Pihlström 2002; Thompson 2012). This does not mean that we do not live in one reality, but there is a complexity that defies the analysis from one perspective. Our experience and view of the world will depend on our position, but we can change our position—over the life course, socio-culturally, and historically—and learn from different experiences (Dreyfus and Taylor 2015).

The evolution of complexity will make use of very different strategies and media, e.g. in biological (“genes”) and symbolic systems (“memes”) with learned behaviours (“habits”) incorporating both. The emergence of “the social” is linked essentially to the emergence

of symbolic media evolving in interaction and communication. Evolution, however, will occur whenever there are generative structures (potentials) creating novelty and relative stable structures (conditions) ensuring that the potentials can produce favourable outcomes in relation to internal and external conditions (adaptation and selection). Favourable outcomes will tend to stabilize their conditions, since selection favours also the conditions enabling the outcomes. As Wimsatt (1999) reminds us: “Gold or not. If you like eggs, protect the goose!” This “dialectical” or better “triadic” interdependence of *potentials* and *conditions* of development in a certain *context* is a general process in all evolving systems. It is the first principle we use for the construction of relatively autonomous levels or modules.

Simon (1973) has shown that the evolution of more complex systems will rely on relatively stable elements that will constitute the more complex structure. Hierarchies or an “architecture of complexity” emerges which, in turn, will create “downward” and “upward” effects of adaptation. The relative stability of these building blocks and their contribution to the stability of the architecture will depend on the relative stability their elements and on the relative stability of their environment. We can compose and decompose the complex architecture in different ways, following the argument from Wimsatt above, but in each case we have to consider this structure of at least three relative autonomous levels. Moreover, these levels will consist of *processes* stabilizing the system and show effects of downward and upward adaptation and evolution. This is the second principle applied in the design of modules, although we only use it in the case of society.

In elaborating these societal levels, we favour an action theory that places human agency and social practices on centre stage. This option follows a pragmatist and pluralistic position on emergence and the social level (Margolis 1995; El-Hani and Pihlström 2002). Action theory, moreover, becomes an essential perspective whenever we have to introduce and discuss ethical issues of sustainability, especially in the context of social policy, responsibility and accountability. It is also closest to our everyday experiences of the “good society” and the “good life”. This perspective on social practices, we assume, facilitates the SOLA objective of mediating between disciplines and empirical approaches to the explanation of human behaviour as well as the integration of ethical standards into our visions of social sustainability. We suggest to refer to the social action theory as developed by Anthony Giddens (1984). However, we should keep in mind that the SOLA model does not rely on or imply this specific usage of action theory. In the perspective of our meta-theoretic framework, we just treat Giddens’ theory as one possible interpretation of the general principles. Social actors communicate and interact to produce and reproduce social systems. This implies, at least, three levels of the “social dimension”: social actors, social structures and institutions, and the processes which mediate between them.

The three levels are produced and reproduced in different *time horizons* essential for their distinction:

- *Actors* enter social interactions as persons with relative autonomy based on their personal development; their environment provides a (more or less favourable) framework, but in the end they have “to do the living and being themselves”; they have to cope with changes over their *personal life time* and try to achieve QoL in their daily activities.
- *Interactions* are produced, reproduced, sustained and changed according to rules adapted to situations bound in *present time and space*; the situation will be determined by concrete conditions (resources, persons, organisations, institutions) provided by the structural context; conditions will either enable activities or hinder them, and they have to allow for the relative autonomy of actors, otherwise *social* interaction is impossible.

- *Structures* and institutions are changing but relatively enduring features of social systems which provide a framework for interactions. Structures and institutions are the infrastructure and the investments or “capitals”, which can be developed over *historical time*. As the relatively stable features of society they receive most attention in the current debate on (economic and) social sustainability. They—rather than (re-)productive processes—are often seen as the elements of society that have to be sustained, namely, the institutions of economic welfare, political democracy, science and education, and civil society or social capital.

The SOLA model makes the assumption that the distinction of levels with relative autonomy and stability is meaningful following the general principles of the architecture of complexity. Given the interaction between levels, there is no need to assume that any one level dominates the others, and social change may originate on an individual, interactional or institutional level. The SOLA approach in a meta-theoretic perspective just takes care that all three levels are represented. It can be argued, however, that the level of interaction has a specific role as the level of collective action and, therefore, for the capacity of a society of producing and sustaining social quality. This is the “strong” assumption of the SOLA approach to societal sustainability and our approach shares this assumption with the Social Quality approach (SQA) (Van der Maesen and Walker 2012). As we said, this “strong” assumption can be weakened to allow for changing importance of the structural level (macro) or the actor level (micro).

The other crucial step in the hierarchy is the step from existing and historical, cultural traditions to normative systems as formulated in philosophy and the philosophy of science (social, ethical and moral philosophy, aesthetics, logic and mathematics, etc.). Both levels are symbolic levels, but there are good arguments to keep the symbolic social level as a level of empirical social sciences distinct from the normative level. A well-known version of the “Third World” in this sense is presented in Popper’s theory of evolution (1972). Following Parsons (1978), we may call this level the *telic system* which in some sense transcends the level of social systems. Similarly, Kenneth Boulding (1978) enters a transcendental level at the top of his evolutionary hierarchy. It is common practice (not only) in the debate on sustainability to accept scientific and technological knowledge as “given”, and to exclude the realm of ethical values from the debate in favour of “value-neutral” science. However, in social policy and the discussion of sustainability and quality of life we find us unavoidably entangled in debates about the “good society” and the “good life” which do not (yet) exist and which we want to achieve in the future. As a way out, ethical standards and values are also treated as “given”, in this case, by some prior undisputed political consensus.

Unfortunately, in a pluralistic world we can less and less rely on “given” values. Moreover, we acknowledge more and more that the diversity of views and cultures are an asset and, actually, a *prerequisite* of an innovative and critical discourse on the conditions and meaning of the “good life” and the “good society”. Still, the essential role of pluralism does *not* imply a cultural relativism of ethic and values. Acknowledging existing pluralism *does* mean, that the evolution of human rights, intercultural ethics, and an “agenda of universal well-being” (Taylor 2011, p. 114) presupposes the co-evolution of certain societal conditions—just as scientific knowledge does. We can search for objective “truth” in the realm of ethical values in much the same way as for “truth” in science, which means that we have to implement these values in our political institutions just as for science (Dworkin 2011). In the vision of a sustainable society, the search for “truth” in both realms has to be combined without substituting one for the other. To escape relativism and engage in

a discourse with other views, we have to make a distinction between the level of existing cultural and value traditions and a level or an “arena” or a “third” perspective in which we are willing to discuss our differences and find agreements. This arena has to be “of this world”—like everything else—and it is most effectively institutionalised in the global public debate and the institutions defining and developing human rights and scientific research. In the debate on sustainability, a forceful argument for this position has been made by Sen (2009) and Martha Nussbaum (2011).

4.2 The Four Dimensions of the SOLA Model

The SOLA approach aims to provide a conceptual bridge between the sciences, i.e. between the levels of complexity. This aim requires a framework which is more general or abstract than the frameworks for societal or social sustainability. For this purpose, four general functions are distinguished which apply to all evolving and self-sustaining systems. The functions are rather complex and could be composed (Wimsatt) in different ways and numbers, but they help to design our modules in consistent way (supported in digital versions of diagrams by four specific colors):

- the *adaptive function* utilises the inputs from the environment;
- the *effective function* controls the influence on the environment;
- the *integrative function* provides stable coordination or an internal environment for the other functions;
- the *evaluative function* determines the aims and values which a system tries to achieve or sustain including diversity enabling multi-stability under varying aims or changing environments.

The function of evaluation may surprise in this context. The concept of “sustainability” (or survival) as goal and overarching value indicates that evaluation is, in fact, a function which is determined also in the interaction with the environment. Goals are developed and stabilized under the selective conditions set by the environment. The environment also provides the favourable conditions and resources enabling the development of complexity. But sufficiently autonomous systems can also select environments more suited to their goals. Flexibility and internal diversity are prerequisites for this strategy of evaluating alternative options. The functions follow from the system principles introduced above, namely, (1) the interaction of generative potentials, enabling conditions and selective context or environment, and (2) the affordances of relative stability of building blocks in the evolution of complexity. For our claim that the SOLA model is not depending on any particular *social* theory it is important to introduce this system theoretic approach. There is an affordance that these four functions are fulfilled, but *how* depends on the system considered, i.e. the mechanisms will differ.

The distinction of the four functions or processes can be applied to environmental systems and human ecology as well as planning and engineering sciences, and they underlie much of formal organisation theory (Pieper et al. 2008). Sustainable systems have to implement these four functions, they are necessary conditions of sustainability. They are also non-substitutional in a strict sense (Fleurbay and Blanchet 2013), although they allow for mutual compensation within certain margins. In the case of social systems, there are things “money can’t buy” (Sandel 2012), but without food and shelter, we will not live to enjoy them.

It was Parsons' insight that the four functions can be applied to all social systems and on all levels—persons, interactions, and organisations—as long as they are conceived as self-sustaining structures. Elsewhere, we have explored the obvious links to environmental psychology, coping theory and the concept of quality of life (QoL), e.g. in Lawton's model of QoL (Pieper and Vaarama 2008). Parsons chose the concepts of adaptation, goal-attainment, social integration, and latent-pattern maintenance for the four functions—his well-known AGIL-scheme (Parsons 1977, 1978; Joas and Knöbl 2009). The “social” receives here a more specific functional interpretation, which can be identified on each level of society (see Fig. 1):

- On the level of relatively stable societies, these functions are organised as economic, political, social, and cultural structures, institutions and subsystems; the social refers to the civic society interacting with the economic, political, and cultural sub-system.
- On the level of interaction, social integration is “gluing together” actors on the basis of love, trust and caring, productive work establishes access to goods and services and environmental infrastructures and resources, political participation ensures the pursuit of own interests in cooperation with others, and socio-cultural norms and rights are applied in defining ways of life and protecting against discrimination.
- On the level of QoL of individual persons and their practices, integration refers to affective regulation or emotional life, which is interacting with economic life (access to resources or standard of living), with political life (autonomy and control expressed in competence and effective participation), and cultural life (value orientations expressed in personal identity, life style and social relationships).
- On the level of basic needs, we find the safeguarding from anxiety in caring relations (typically in the family) aside of subsistence resources (like food and shelter), health and functional abilities, and basic education in communication with others (language).
- On the level of human ecology, integration refers to the embeddedness of social life in concrete locations of space and time expressed in territory, connectedness and mobility patterns of activities (time-geography), while the environment provides the resources, populations carry human agency and activities, and the material culture and technologies express the ecological dimension of socio-cultural life.
- On the level of ethical values, solidarity and empathy are complemented by values of equity and welfare, freedom or liberty, and social justice or human rights.

In this perspective, the social function describes the *general* integrative function of systems on each level of society and for society at large. The functions can be analysed in more detail as causal processes or mechanisms: “Generally speaking mechanisms are the bare building blocks—the nuts and bolts, cogs and wheels—of explanation in the social sciences” (Elster 2011, p. 61). Mechanisms describe cause-effect relations or more generally determinations and transitions (Demeulenaere 2011); the four functions or dimensions focus on problems to be solved and challenges for relative stability in evolution and development. Mechanisms will “survive” only if they provide a relative advantage in problem solving and contribute—in Elster's words—to forming stable “building blocks” of the four functions. The Social Quality Approach (SQA) has developed these functions in a specific way by focusing on the emergence of “the social” in interactions. Unfortunately, this strategy ties their framework very closely to the “social universe” (see below).

Concerning the link between general system theory and social theory, Luhmann (1973, 1975) is to be credited for re-formulating the four functions in terms of codes or interaction media that facilitate the “reduction of complexity” of an otherwise overwhelming

environment, i.e. exchange or *money*, *power*, *meaning*, and *trust*. Especially his analysis of trust helps to understand it as a general mechanism of coordination in interaction in line with systems theory. Namely, social systems ensure relative stability by trust and reliance on pre-existing conditions and potentials, on programs, on-going procedures, and stable trajectories of development. Integration follows the principle that not everything can be questioned or changed at once, if we want to achieve anything at all. Trust, in this sense, is not governed by any specific cultural norms (like “the norm of reciprocity”) and not restricted to the level of personal interaction, but exactly by the need to build bridges even in the *absence* of norms by relying on trust and avoiding anxiety. In this way, trust and solidarity provide the proverbial “glue” to social activities, which often appears to be irrational, emotional and even disruptive, but it can also be innovative, because it is not necessarily following accepted rules. In child development, we find the best example for the creative role of primary trust in *enabling* the acquisition of social norms. Developing social interactions similarly depend on trust to establish norms and rules. Trust emphasises the “unconditional” reliance on institutions, practices and other actors: *not* motivated by benefits (exchange, money), *not* by power or threats, and *not* by the “logic” of some argument of ideology, but just based and trust or love. It is produced and reproduced in interactions through—positive and negative—commitments, loyalties, passions and emotions incorporated in interaction and constitutes a powerful innovative and disruptive dimension often neglected in social theory.

4.3 Social Capital and Social Quality: Two Strategies

The SOLA model suggests two strategies for defining, measuring and monitoring the social dimension: the Structural Social Profile and the Social Quality Profile (see Fig. 1). For the Social Quality Profile comprehensive sets of indicators have been proposed and researched by proponents of the Social Quality Approach (see below). For the Structural Social Profile, research on social capital is providing a diversity of instruments, and the problem is to agree on key indicators in view of different conceptual approaches and research results. To evaluate if and how the SOLA model is mediating by proposing two profiles, we will take a closer look at the two approaches.

4.3.1 The Social Capital Approach: The Structural Social Profile

Social capital in social indicators research is enriching the dominant economic perspective (“*beyond GDP*”) by introducing a distinctive social dimension and bridging between the individual and the structural level. The Social Capital approach (SCA) has made a great career in the last decade leading to conceptual and empirical research based on the seminal work of Granovetter (1973), Putnam (1993, 2000) and the World Bank (1998) and Woolcock (2001). Landolt (2013) has provided a useful discussion of the concept. Rostila (2013) has reviewed the application of the concept in welfare and health research, and his research documents the important role of social capital for inequality in European welfare states.

In view of the SOLA model, the concept can be re-defined by a Structural Social Profile of the social dimension across all levels including structures of civil society, social networks and communities, and social relations and commitments on the individual level—as distinct from an economic, political, or cultural profiles (see Fig. 1). A problematic feature of social capital is that it is frequently substituted for the social dimension in ways that

effectively exclude structures and institutions of civil society and social cohesion on the community level and even more so on a national and international level. But, social capital and its media are globalising just as well as other structures and institution. Their integrative function or, as Edwards put it, their “ability to marry different functions together (...)—the creation of hybrid organizations that combine service delivery, capacity-building and advocacy, or the combined personal and structural changes captured in the civil rights movement’s philosophy of ‘the love that does justice’” (2014, p. 217) works on all levels. Moreover, note that Edwards is alluding here explicitly to the integration of the three other functions. Thus, in the SOLA model we argue for a wider concept reaching across society, not reducing it to the level of individuals and their QoL by measuring social relations or social isolation of persons. In this perspective, much of the heated debate—whether social capital should be understood in terms of institutions, cultural or social capital, communities, associational life, social networks or personal relations—becomes a debate of *internal* aspects of the concept spanning over different levels of social organisation. Again, the SOLA model serves as a meta-model. We should expect the more specific mechanisms to be changing with the context, but the general concept of social integration (or social cohesion; see below) could still distinguish social capital from *other* types of relations or “capitals”. Let us consider some of the more crucial ambiguities in the current understanding of the concept.

As Rostila points out, “theoretical uncertainties” still exist (2013, p. 28). Social capital is considered as: a resource like other resources in the social environment; a facilitator of cooperation; an informal norm of reciprocity; or an information channel between agents. Rostila proposes to distinguish

1. a structural level of connectivity versus a cognitive (psychological) level of trust, and
2. informal or “thick” relations versus formal or “thin” relations (pp. 28–36).

The latter distinction reminds of Granovetter’s distinction of “weak” and “strong” ties. The former distinction reflects the SOLA distinction between levels. Rostila is aiming at social connectivity or social relations. We should, therefore, point out that structural connectivity (or channels) can be produced by different activities and technologies, some may be better analysed, say, in economic terms; other forms of connectivity should perhaps be analysed in terms of human ecology, i.e. as technologically enabled connections in space/time. Unclear is how the social structural connectivity is conceptually related to the individual level of trust. Some points need clarification:

First, it is not meaningful to understand simply *all* social relations as social capital. Being a social animal means being in relations, it is the way we conduct our life. We want to distinguish *kinds* of relations or *dimensions* of relations. The essential difference is not between structural connectivity versus cognitive trust, as Rostila has it, but between connectivity sustained by trust versus connectivity sustained by *other* mechanisms such as exchange, power, or cultural norms.

Second, another way to conceive social capital is to treat it as resource available throughout the system. Distinguishing types of resources or support, e.g. information, finances, orientation, emotional support, is clearly meaningful (and applies the four dimensions to the concept of resource !). But a “resource-based” approach—often attributed to Bourdieu (1986)—is rather misleading. It tends to confound cohesion with access to resources, i.e. security. Essential for Bourdieu is the *quality* of the relation or network, which facilitates access to a diversity of resources (see Rostila 2013, p. 20). This quality is trust or “credit”

in terms of “capital”. It is a code or medium of interaction as described above (see Luhmann 1973, 1975). The quality does not depend on the amount of *other* kind of resources accessible. Your social capital is not increased if your good neighbour wins in the lottery. If she does not trust you, you never get anything. Your social capital increases with mutual trust, with the number of good friends and/or the intensity of the relationship, i.e. with the disposition of your friends to cooperate with you and help you out in antecedently not specified situations. Social capital increases with “weak ties” turning into “strong ties” (Granovetter).

Third, there is not a trade-off in the sense that more strong ties limit the amount of weak ties one can have. It is rather that one has to experience strong ties in childhood to be able to build up (also) weak ties later on. A socially “rich” society—one that creates few barriers to trust—will have also more social capital. Trust behaves like a currency (like money) or a collective good in the sense that persons can rely (or not) on the disposition of others to comply “unconditionally” with expectations for support. The fact that there is trust is not (only) an individual disposition, but a special property of social networks produced and reproduced in interactions and embedded in situations. Trust in institutions arises in as much as institutions are experienced in situations. Rostila—and other proponents of social capital as a resource—loses sight of this quality, which is essential to understand the intimate connection between trust and emotions on the personal and interpersonal level, and to explain the effects of a lack of cohesion on emotional life and health.

Fourth, the specific function of trust and social capital is not captured adequately by reference to social norms such as the “norm of reciprocity”. Trust in others and caring for others is guided by social norms, just like any other social activity. But trust concerns more the mechanism why we *adhere* to or comply with norms rather than not; it is more the “glue” making everybody “sticking” together and following the norms of doing things together. Trust is so vulnerable to disappointments or betrayal exactly because trust is given unconditionally and asking for compliance to share norms “no matter what happens” and “without questioning the exact content” of norms.

Fifth, concerning ties in groups and communities, Rostila (2013) also discusses and demonstrates the possible negative effects of bonding within groups and sub-cultures on social cohesion. The role of social capital in social cohesion in a given context, clearly, is an empirical question also for social quality. But as Rostila observes, negative effects typically arise with “closure” of social relations, e.g. with distinctions of “we” and “they” involving socio-cultural identities and/or relations of power and deprivation. The SOLA model proposes to re-construct closure and conflict as *interdependence* of cohesion with *other* dimensions, especially with inclusion and inequalities.

Sixth, aggregating personal social relations will not adequately indicate structural social integration, although social isolation is a quite powerful indicator for lack of cohesion. Averages are also not very informative, since persons may have “too many” or “too few” relations depending on their positions in society (e.g. politician vs. artist) (for a positional approach to SCA see Lin and Erickson 2010). A person-centred view is not enough, since persons may be structurally at risk to lose their relations. Social integration may not function effectively when persons make transitions over the life course (e.g. social isolation at old age) or encounter a life crisis (e.g. divorce). Kvist (2018) has placed transitions over the life course into the context of social sustainability and inclusive growth employing four conditional factors (health, education, work, family) which is readily reconciled with the SOLA model. Successful transitions are clearly an important *structural* element of intra- and intergenerational cohesion (de Haan and Rotmans 2011). The performance of society

in transitions is an important aspect of social cohesion in social quality, precisely because transitions imply a loss of social order to be compensated by trust.

To sum up, the recognition of social capital as an essential element of societal sustainability in current social indicators research is an important step forward. To use social capital in the SOLA model as the basic concept for the Structural Social Profile we have to broaden the concept, however, to reach across all levels. This implies that the function of social integration is defined more generally—as we have proposed. The profile can then be employed together with other structural profiles in a “weak” strategy of monitoring societal sustainability.

4.3.2 The Social Quality Approach and the Social Quality Profile

The SQA was developed with the objective to promote the European Social Quality Model by defining and measuring social quality in four basic dimension (Beck et al. 1997, p. 3). The SOLA approach owes to SQA the placement of interactions in the center of social quality (Fig. 1) and the explicit inclusion of the module of value standards. However, we propose a different theoretical background for the four dimensions to make the general model more flexible and to allow for interdisciplinary communication between different models.

Originally, the SQA did not start with a specific theoretical foundation, although the “theory of human need” (Doyal and Gough 1991) furnished for social quality an “underpinning by a theory of universal, objective human need” (Gough 1997, p. 83). The social transformation of basic needs takes place “within social formations which comprise common ‘socially significant activities’: production, reproduction, cultural transmission and political authority” (Gough 1997, p. 84). These formations are the societal preconditions for need satisfaction (p. 85), and they clearly influence the first exposition of the SQA model (Beck et al. 1997, p. 286). Obviously, these “formations” mirror the dimensions of the SOLA model in a different terminology. Later, the SQA turned emphatically to socio-phenomenological theory focusing on the constitution of “the social” in social interaction (Van der Maesen and Walker 2012, p. 48). The model offers elaborate discussions of the four dimensions, proposes valuable tables of empirical indicators, and inspired a considerable body of research. However, as Gasper (2011)—proponent of SQA—observed, the connection to other developments in social theory including e.g. the capability approach and other QoL models was lost, and he saw SQA in need of a re-formulation to regain its place in the debate on European social policy.

The SOLA model, essentially, keeps the four dimensions, but in a first step removes the theoretical frame (proposed already in the first elaboration; Beck et al. 1997, p. 286). The frame consists of two higher order dimensions applied both to the constitution of the social actor and the social conditions (see Van der Maesen and Walker 2012, pp. 57–61)

1. societal (macro) development versus biographical (micro) development (vertical axis)
2. system integration versus social integration (horizontal axis).

These dimensions create a “field of interactions” or “tensions” (p. 51) forming the four “social quality quadrants” and structuring “the social”.

Comparing the approaches (Figs. 1, 3), we see common features and important differences:

Fig. 3 The social quality approach (adapted from Van der Maesen and Walker 2012)

1. The SQA models the processes on processes of *social interaction*, while the SOLA model takes a step back—so to speak—to define a more general or meta-model applicable to different levels. In this perspective, “the social” in SQA corresponds largely to the level of interaction in SOLA. This focus on social interaction, however, has the disadvantage that the model is closely tied to the “social universe”.
2. The focus on the emergence of “the social” in interaction has the conceptual effect that the level of structure or society and the level of individual agency are *not* articulated in their own right in SQA as in the SOLA model. The basic dimensions articulate “force fields”, but not relatively autonomous levels. There are references to Bhaskar (e.g. p. 55) and his distinction of structure and agency (Bhaskar 2009). Also, the need is recognized that “the constitutional factors have to be elaborated theoretically” (p. 59) to adequately include concepts of individual QoL. But the SQA does not apply the four dimensions explicitly to all levels. The advantage of the SOLA model is lost, i.e. the generalization to other levels and disciplines even beyond “the social”.
3. The relationships *between* the four dimensions are also conceived differently—with ambiguities conceptually and in the tables suggesting indicators for each dimension. For instance:
 - The two basic dimensions both imply levels of society and tend to obscure the distinction between the three levels of actor, community and society.
 - Empowerment and inclusion are aligned with the actor level which induces a concept of empowerment strongly oriented toward the individual actor and social participation. Inclusion, similarly, is strongly conceived in terms of social network participation. Engagement in more formal activities in political governance are neglected. This apparently motivated Abbot and Wallace (2012) in a recent applica-

tion to move indicators of political activities like voting to inclusion. They conclude that the political factor has to be further developed.

- Cohesion and security are aligned with the societal level. This favors the mix of cohesion with elements of inclusion (or exclusion) on that level, similar to the concept of cohesion used by the European System of Social Indicators EUSI. Anchoring cohesion on the societal level in the tradition of Durkheim creates also difficulties for the conceptualization of social relations, social networks, trust and social capital. Typically, proponents of SQA reformulate cohesion, therefore, in terms of social networks and trust (Berman and Phillips 2012; Monnickendam and Berman 2008). Security, on the other hand, appears on first sight adequately represented by indicators, however, the labor market dominates economic activities, while productive activities in other contexts like in households and in the neighborhood are not included.
- The alignment of inclusion with security on the side of system integration supports a tendency to focus on inclusion by the institutions of the welfare state and inclusive growth. Inclusion into the system of public services is—in modern welfare states—an indicator for the implementation of citizen rights. But we should be careful not to neglect the many other ways and other spheres of society where social rights may be endangered by discrimination.

In the perspective of the SOLA model, most of these difficulties can be solved when the four dimensions are applied explicitly to all three levels.

To sum up, the SQA will profit from the different contextualization of the four central processes in a meta-model, and the somewhat blurred distinctions between the dimensions become more sharpened (see the indicator tables in Van der Maesen and Walker 2012). The basic dimensions of the SQA framework can be employed fruitfully in the SOLA model. The interplay of system integration versus social integration can highlight the role of *formal versus informal relations* in the interdependence of the level of social interaction and societal structures. However, we should also be aware that the distinction loses its force in digital society. The development of *agency versus societal development* accentuates an important aspect of agency included in the SOLA model, namely, the time horizon of the life course. In the SOLA approach this is a reason to assume the relative autonomy of the agent level. Finally, the critical impetus of SQA can and should be preserved. The explicit inclusion of the normative module in the SOLA model is drawing on the SQA, and the use of the “strong” strategy enhances the role of empowerment and collective action,

5 In Conclusion: A Social Policy Perspective

The basic structure of the SOLA model was developed in in the context of social policy, especially in the context of quality management in social and health care (Vaarama et al. 2008). The conceptual framework was indebted to the social production of welfare approach (Knapp 1984) which influenced the SQA. More recently, both merged with the social investment approach adopted also by EU social policy (Castles et al. 2010; EPC 2012; Hemerijck 2017, 2018; Deeming and Smyth 2018). The approach interprets societal institutions as investments or “capitals” which are utilised in social policy as resources to produce social innovations, which, in turn, produce QoL as policy outcomes. The process is not a one-way street; citizens will react to outcomes and exert influence on policies and innovations leading eventually to new social investments, institutional change and social

progress. A good example of this strategy is found in current EU social policy and the aim to implement “virtuous circles” sustaining desired objectives such as high employment or social cohesion (see EPC 2011; Hemerijck 2018). The strategy, in fact, implements innovations in all four dimensions. And there is empirical evidence for the success of strategies implementing “virtuous circles” in welfare states with different societies realising quite different, relatively stable solutions (Hagfors and Kajanoja 2010).

On the conceptual level, the SOLA model helps to clarify the meaning of terms like “inclusive growth”, i.e. combining goals of *economic* growth with socio-cultural and legal *inclusion* (Deeming and Smyth 2018). A look at Fig. 1 suggests, this strategy should be complemented by strategies combining new models of *governance* and public services with strengthening *civil society* in a “mixed economy”. In the context of sustainable social policy, this has been pointed out by Jenson (2018). Furthermore, the comprehensive claims of the social investment approach are better placed in a “strong” strategy with reference to a cross-cutting concept of social quality, which is not “boxed in” by traditional distinctions of policies and emphasizes the capabilities and social rights of citizens. Comprehensive social policy has to be supported by an equally comprehensive approach to monitoring outcomes by social indicators. The SOLA model offers such an approach.

By choosing a meta-theoretic model grounded in general systems theory and action theory, the model promotes a conceptual framework wide enough to accommodate the diversity of theoretical models and instruments currently developed and tested, and integrate concepts and indicators from across disciplines in a unifying framework. Especially the *Social Quality Profile* and the *Structural Social Profile* measuring social quality and social capital can be interpreted within indifferent theoretical or disciplinary backgrounds. The objective is not to substitute the wealth of existing approaches to measure outcomes in social indicators, but rather to facilitate the comparison and guide future developments. The approach is also *value-based*; normative concepts and a frame of values are explicitly included in the model, and we emphasized the need to agree discursively in a public arena on vision and values concerning the “good society” and the “good life”. This feature of the SOLA model was not discussed in detail here, and it clearly needs more attention and treatment.

The SOLA approach as presented here is only a starting point for further research and development. Clearly, we need further research to establish an informative set of indicators and procedures for the model. Fortunately, since the model is designed to consolidate research of the community of social indicator research, we are here not only dependent on our own on-going research, but we all can draw on the contributions of many others.

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