

UFZ Discussion Papers

Department of Environmental Politics

17/2012

Addressing Sufficiency – Including altruistic motives in behavioural models for sustainability transitions

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November 2012

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Submitted in 10/2012 to SSPP (<http://sspp.proquest.com/>)

Abstract

The main motivation for sustainable development, as defined in the Brundtland report, is to care for other humans – for the world's poor and for unborn people. Traditional economic models use the motivation to increase one's own well-being as the main motivation for action. Efficiency-improvements, as the main focus of the economics-based models have largely shown to be ineffective, due to rebound effects etc. We assume that efficiency or consistency improvements can only be effective when accompanied by a more fundamental value shift. A shift including altruistic motivations for behaviour, as they are part of sufficiency strategies for sustainable development. Models that reduce motivations for actions to self-centred ones cannot account for such change. The Capability Approach as an alternative to neo-classical approaches, distinguishes between interests in own well-being and other-regarding interests. Yet it has seldom been applied to address the latter. Tested psychological models that encompass both motivations, on the other hand, have no scope for analysing wider societal effects of policies. This paper therefore integrates psychological knowledge in a capability framework, to be used as a basis for empirical analyses. The developed model should allow the design and assessment of efficiency, consistency, and sufficiency strategies for sustainability transitions.

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ACKNOWLEDGEMENT

The research leading to these results has received funding from the European Union FP7 ENV.2010.4.2.3-1 grant agreement n° 265191. The authors wish to thank their colleagues from the EU FP7 project InContext for their helpful comments, discussions and contributions to this writing.

1 Introduction

"Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and*
- the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs." (WCED, 1987)*

The most common definition of sustainable development (SD) is the one from the Brundtland Commission stated above. Central terms in the Brundtland definition of SD are 'needs' and 'limitations' (WCED, 1987). Reinterpreting the fulfilment of *needs*, the idea of a decent quality of life has been seen as a central goal of sustainable development (cp. Di Giulio et al. 2010, Rauschmayer et al. 2011). To reach this goal, SD policies aim at maintaining or even expanding the *limited* space for a high quality of life, e.g. by solving (global) environmental problems and social inequalities/ inequities. Core strategies follow the principles of efficiency, consistency, and sufficiency (cp. Grunwald & Kopfmüller, 2006). Many contemporaneous scholars postulate a claim for intra- and intergenerational justice as the main idea behind the Brundtland conception of SD (Christen & Schmitt, 2011, Anand & Sen, 2001, Ott & Döhring, 2008, Schöpke, 2011). The claim for inter- and intragenerational justice is addressed to governments, business, and individuals alike –all of which may contribute to efficiency, consistency or sufficiency attempts to SD. In this paper, we will focus on the latter, the individuals, the consumption of which has substantial social and ecological impact (Reisch & Röpke, 2004, Jackson, 2005).

It is unclear, though, whether individuals are called upon to check their own everyday (consumption) behaviour to be in line with the value of SD or whether it is in their role as citizens to push policy towards SD (cp. Grunwald, 2010, 2011). In both roles, individual behaviour can be termed sustainable behaviour when it contributes to SD. And in both roles, individuals may act being motivated by their own interest or by altruistic considerations (cp. Stern et al. 1999). To further understand how individual behaviour can contribute to SD, it might be helpful to differentiate between three different understandings of sustainable behaviour:

- *Substantially*, one could consider behaviour sustainable that allows the world's poor and future generations to meet their needs, i.e. to realize a decent quality of life

(specified in one way or another, e.g. by critical natural, social and economic capital¹).

- *Normatively*, one could consider only such behaviour sustainable that is motivated by the wish to allow the world's poor and future generations to meet their needs and to realize a decent quality of life.
- *Procedurally*, one could consider a behaviour, or a set of connected behaviours, sustainable, if the way the behaviour itself is carried out is in line with principles of sustainability (e.g. if the voting procedure on an environmentally relevant infrastructure decision is consistent with principles of inter- and intragenerational justice)².

We argue that it is useful to link the first and the second understanding of SD to analyse the different SD strategies: While efficiency strategies focus on the substantial definition, sufficiency arguments, such as those prominent in the degrowth debate (Kallis, 2011), draw on substantial and normative definitions. Efficiency strategies try to motivate substantial sustainable behaviour only by interest in personal well-being, not necessarily questioning current and consumption-oriented definitions of well-being. This omission of the normative dimension of SD might be one possible reason for rebound effects occurring in the implementation of efficiency strategies. On the other hand, many members of western societies do not adopt sufficiency oriented consumption patterns easily. Various barriers impede this adoption, like e.g. conventions, feared loss of convenience, or conflicts with common consumerist lifestyles (Stengel, 2011, cp. Fuhrer & Wölfling, 1997). Increasing the willingness to take responsibility and to bear the cost related to adopting a sufficiency lifestyle seems to be require a fundamental value shift (Stengel, 2011), so that individuals can increase individual well-being through pro-social behaviour³ (cp. Jackson, 2009). Ways to

¹ In the scientific and political discourse on sustainable development there is disagreement on how to concretize what forms of capital should be kept or built up to which extent for enabling the fulfilment of needs and realizing quality of life (Neumayer, 2010). A basic differentiation is the one between one-dimensional and multidimensional concepts of sustainability (Kopfmüller et al. 2001). While one-dimensional concepts put special emphasis on the natural environment, multidimensional ones stress the role of social, economic, cultural and/or political-institutional in addition to the natural dimensions for the fulfilment of human needs.

² For reasons of simplicity, we do not follow the strand of procedural SD here (cp. Leach et al. 2010 for an in-depth discussion).

³ The orientation to act in coherence with the common good, even if it is conflicting with individual interests, can be called altruism or pro-social behaviour (Fuhrer & Wölfling, 1997). There are various definitions of the terms "pro-social behaviour", "prosocial values" and "altruism", which overlap to a large extent (e.g. Twenge et al. (2007) define pro-social behaviour as "actions that benefit other people or society as a whole"). Altruism is defined as "a motivational state with the goal of increasing another's welfare" (William

overcome the barriers need to be assessed and evaluated to show their effectiveness. Therefore psychological considerations on individual motivations to behave sustainably become crucial (Kaufmann-Hayoz et al. 2010). Those models of individual (citizen or consumer) behaviour should account for altruistic motivations for SD, if one wants to assess efficiency, consistency, and sufficiency strategies for making behaviour more sustainable (cp. Ingebrigtsen & Jacobsen, 2009).

It has been shown that SD policies based on efficiency or consistency are only very limited in their success: limited in the spatio-political, resource or time scale (Jackson, 2009). To integrate sufficiency strategies coherently into policy design and assessment, different models of human behaviour are required⁴. It is unclear, though, which models this can be. While policies based on efficiency or consistency strategies can be analysed and evaluated by using mainstream behavioural models based on well-being or utility maximisation, the evaluation of sufficiency strategies is hampered by the lack of appropriate models. There is ample evidence, though, that non-consumptive behaviour and the well-being of others are important for one's own quality of life (e.g. Diener, 1995). Both aspects are also reflected in current lists of basic capabilities (Nussbaum, 2000), most basic reasons for action (Grisez et al. 1987), fundamental human needs (Max-Neef, 1991) or other such lists of what constitutes human flourishing or quality of life (see Alkire, 2002 for a comparison). We suggest that a behavioural model is needed that includes altruistic motives and can be therefore a basis for a more holistic policy design and assessment. This implies that such models have to include self-centred and other-centred motivations as well as different impacts of changed behaviour at a societal level. Most current psychological models don't fulfil this last requirement in that they don't link behavioural analysis with assessments of achievements at a societal level (cp. for environmental psychology: Osbaldistan & Schott, 2012), such as quality of life.

It is the main aim of this paper to develop and discuss such a model that combines societal and psychological elements to make it suitable for discussions on sustainability transitions. In search for new models of sustainable behaviour allowing for policy analysis, we therefore link psychological models of sustainable behaviour with the capability approach

& Darity 2008). There is debate on whether pro-social behaviour and altruism lead to future benefits of the helper (e.g. Twenge et al., 2007, Knickerbocker, 2003). In this article we look at altruistic motivations as sources for pro-social behaviour, no matter whether there are future benefits to the actor or not.

4 Welsch (2009) "naturally" considers "subjective well-being – or experienced utility – as a standard of policy evaluation" and considers these "as an alternative or a complement to preference-based or objective-list based approaches to the evaluation of public policy (Kahneman & Sugden, 2005; Dolan & White, 2007)". We will propose capabilities as the metric rod for policy evaluations, as they explicitly include altruistic motivations.

(Rauschmayer et al. 2011). Capability as the freedom to live a life one values or has reason to value has become prominent in the discussion on human development, i.e. in the discussion on global intragenerational justice. Understanding such freedom as the basic quality of life, the capability approach offers a structure to better understand what individuals require in order to have this freedom. Capability-based assessments have been widely used to monitor societal achievements. In the following, we will suggest that the image of human behind the Capability Approach, as developed by A. Sen, M. Nussbaum and others, can account for the difference between self-interested and pro-social behaviour. At the same time, it can be extended by results from psychological research to explain differences in behaviour when shifting to sufficiency. On this basis, policy recommendations for sustainability policies can be drawn that are based on a model of individuals richer than most of current economic research and more oriented to public policy than most of psychological research.

In this paper, we develop and discuss such model, so that SD policies can be designed and assessed on a better basis. We proceed stepwise: first, we elaborate the differences between efficiency, consistency, and sufficiency strategies for SD. We then introduce the concept of capabilities in the context of SD. Third, we link this concept to psychological research on environmental behaviour. Fourth, we sketch a model based on these links, before discussing perspectives and limitations of this approach. The paper will close by a summary and outlook.

2 Sustainable Development: efficiency, consistency and sufficiency strategies

We understand the main motivation for sustainable development (SD), as it was defined by the Brundtland commission, as the wish to care for other humans – for the world’s poor and for unborn people (WCED 1987, points 1-4). Its main implications are intra- and intergenerational justice on a global scale (WCED, 1987). To achieve this goal, i.e. to be able to meet present and future needs (ibid.), production and consumption patterns have to change dramatically. As mentioned above, central strategies to change behaviour are, among others, based on efficiency, consistency, or sufficiency principles. When trying to understand individual consumer or producer behaviour, mainstream economic models are based on revealed preferences and focus on realizing *efficiency* principles. In the light of such models, sustainability strategies based on efficiency gains appear to be promising, insofar as they apparently allow reducing resource inputs into well-being production. The aim behind propagating efficiency strategies (e.g. Lovins et al. 1998) is to create win-win situations, realising growing personal well-being and a shift to SD at the same time. Individual interests, values, and preferences don’t have to change for an altered behaviour that promises a growing consistency with SD requirements if the incentives are rightly set. Such models

either don't account for motivations or assume that all actions can be explained by the motivation to maximize one's own well-being (for a discussion see Kals & Russel, 2000). Following an overall strategy of efficiency, SD would come about without the individual actors having to care for other humans as a main motivation for action.

Nevertheless, efficiency-improvements (in energy or resource use) meant to improve the sustainability of our societies have largely shown to be ineffective, due to compensation effects like rebound, mass and growth effects (e.g. Hinterberger et al. 2009, Crompton, 2011, Jackson, 2009, Kleinhüchelkotten, 2005)⁵. Rebound effects occur, when consumers use the saving effect of the efficiency improvements for more consumption. An example is the re-investment of money saved by using more efficient technology into new energy or resource consuming products or product characteristics. An example is to buy cars with more efficient but also larger engines, so that total resource consumption remains the same or even is growing (de Haan et al. 2006). Similar to the effect of lower financial costs, decreasing socio-psychological costs of consumption can be regarded as further possible reasons for rebound effects: when neighbourhood pressure or the norms of a peer group prevent consumers from buying sport-utility vehicles, "this could change as soon as SUVs with hybrid powertrain enter the market" (ibid.). Similar to rebound effects, mass and growth effects occur, when absolute growth in consumption rates outweighs relative savings through efficiency gains.

Similar to efficiency strategies, sustainability strategies in line with the principle of *consistency* such as green new deals or green economies appear attractive, as they promise different production and consumption patterns through fundamental innovations in technology oriented towards a basic consistency with natural capital protection requirements (Kleinhüchelkotten, 2005). Like with the motivational background of the efficiency strategy, consumers would be able to maximize their personal well-being through consuming more, while new technologies would allow sparing the environment at the same time. Sustainable development would be a non-intended, but welcomed, side-effect of the consumer and producer behaviour mainly oriented towards well-being increases, besides the protection of natural capital. If this model were true, then successful environmental protection could be achieved through technical and institutional interventions without deeper consideration of psychological aspects like values, knowledge or social groups (for a contrary argumentation see Kaufmann-Hayoz et al. 2010).

⁵ For consumption as a very relevant source of ecological and social impacts see Reisch & Røpke (2004) and Jackson (2005).

Basic innovations allowing for consistency, yet, are still missing in numerous fields of production and will possibly remain undeveloped for (too) many years (Kleinhüchelkotten, 2005, Stengel, 2011). Both, efficiency and consistency strategies mainly focus on restrictions in the use of natural capital and not on changes in individual values, cultures, or social structures.

Sufficiency strategies for SD, such as voluntary simplicity (Schneider et al. 2010), are based on the individual willingness to restrict the consumption of natural resources⁶. Sufficiency strategies leading to lower consumption appear desirable from an ecological point of view. But they are attractive as well with regard to considerations of intra- and intergenerational justice (Kleinhüchelkotten, 2004). Reducing the pressure on the environment and decreasing the massive inequalities between consumption levels in countries of the global north and the global south implies that new (role) models of sustainable consumption have to be developed (Siebenhüner, 2011). These new well-being models combine sustainability and a good life and are at least in some parts based on an idea of a low-consumption lifestyle, e.g. relying on richness in time and social interaction as sources for well-being and happiness (Hinterberger et al. 2009). In consequence, sufficiency in a broad sense is an integral part of such new prosperity models integrating cultural changes (Kleinhüchelkotten, 2004). But although sufficiency as a lifestyle is argued to increase personal well-being (e.g. Linz et al. 2002), it is not motivated purely by self-interest – harnessing the new sources of well-being like intensified social relations, trust and solidarity depends on pro-social or altruistic values.

We argue that efficiency improvements and consistency attempts need at least to be accompanied by changes in behaviour in line with the principle of sufficiency. Effective SD strategies have to deal with individuals that are aiming to increase personal well-being through consumption as well as through the accomplishment of pro-social values, such as social equality, political participation and the common good (cp. Heidbrink & Reidel, 2011), i.e. with individuals who integrate substantial and normative sustainable behaviour in their roles as consumers and as citizens. Effective SD strategies therefore have to address self- and other-regarding motives relevant for consumers and citizens alike.

⁶ We are not talking of forced sufficiency, e.g. due to poverty, nor of customary and non-conscious sufficiency, but of the conscious choice (implying freedom) of a sufficientarian lifestyle.

3 The capability approach as analytical concept

3.1 The capability approach used to understand and address motivations for behaviour

One main reason why Amartya Sen has developed the capability approach (CA) was his critique to the standard economics' omission of motivation for action: by interpreting every action as mono-dimensional utility maximisation, standard economics loses sight of other reasons why people act (Sen, 1977). Re-interpreting altruistic behaviour as behaviour oriented towards one's own well-being is a categorical mistake. Sen (1987) therefore differentiates between two main motivations for human agency: own well-being and commitments to others' well-being. In each of the categories, he takes multidimensionality of human goals and realizations for granted. In both motivational categories, it is relevant for individuals how well they fare, i.e. which of their goals they can realize (or, in the language of the CA: which functionings they can achieve), but also, whether they have the real freedom to choose among different goals (or: whether they have a large capability set). Resources are a basis for this freedom, but the capability approach pays attention to the personal, cultural and environmental conversion factors that humans require to convert resources into freedoms. An example of personal mobility could illustrate this concept along figure 1: Cycling to work as an achieved functioning could be a realization of a goal of own well-being, but could also meet other-regarding aims taking into account the bike's CO₂-neutrality, silence etc. Cycling to work requires certain resources (first of all: a bike) and is enhanced by the conversion factors such as traffic culture (e.g. in Copenhagen or Amsterdam), protective regulations, and by an appropriate moderate climate and land profile. Political measures

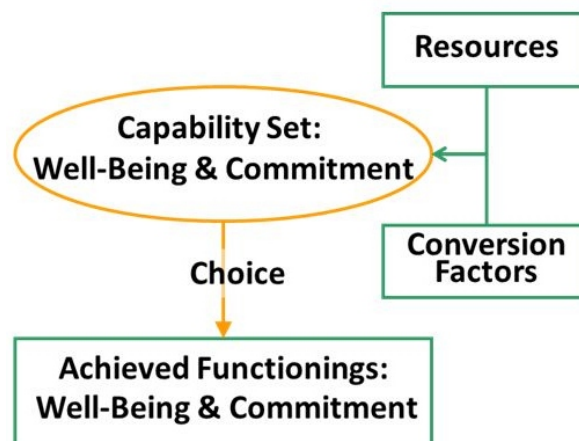


Figure 1: The capability approach

aiming at promoting the use of bicycles herewith can increase individual freedoms, to meet goals of personal and others' well-being, in different ways than just by focusing on the

resources. At the same time, forcing everybody to go by bike would restrict the capability set and herewith lower personal freedom.

This implies that real freedom includes the availability of resources, i.a. environmental assets, but also of social institutions, individual skills etc. to convert these resources into capabilities. Herewith the capability approach is a means to structurally define the idea of a good life in a culturally and historically independent way (cp. Di Giulio et al. 2001). This structure can be used to specify a good life non-paternalistically in concrete situations as shown by the example of personal mobility above.⁷ Sen and Nussbaum developed different versions of what is called the capability approach (cp. Sen, 1985, Nussbaum, 2000). Sen and Nussbaum agree that the evaluative space of what is valuable for human life, i.e. the goal of public policy, is multidimensional. While Sen does not define these dimensions (he argues that this should only be done in context-specific democratic deliberations), Nussbaum has – in a preliminary consensual process – defined a list of fundamental capabilities which she thinks to be essential for any good human life and which any government should guarantee for its citizens⁸.

Even though the link between the capability approach and sustainable development is far from evident (cp. Leßmann, 2011, Leßmann & Rauschmayer, 2013, but Anand & Sen, 1996, Anand & Sen 2000), we suggest that exploring this link offers several advantages (see also Di Giulio et al. 2011), some of which we investigate in the following.

3.2 *Understanding Sustainable Development: needs, capabilities and the good life*

Two issues of the capability approach are important in the context of SD: (1) It explicitly includes goals for actions that aim at the others' well-being, and not only one's own, and therefore has a wide concept of human agency and (2) it links needs, resources, and well-being.

- * Ad (1): Substantial sustainable behaviour can be motivated by a wish to increase one's own well-being. This is especially the case when the behavioural context has been arranged carefully (examples in individual mobility would be good cycle lanes or high taxes on petrol or kerosene used for subsidies of public transport that all

⁷ Additionally, justice can then be measured by capabilities instead of using subjective metrics, such as pleasure or preference, or objective metrics, such as income or access to other resources (Gutwald et al. 2011).

⁸ According to Nussbaum (2000, 2011), the ten central capabilities refer to: life, bodily health, bodily integrity, senses, imagination and thought, emotions, practical reason, affiliation, other species, play and control over one's environment.

relatively increase one's own well-being when choosing a more sustainable mobility). Through such arrangements, e.g. by external incentives or regulation, it is possible to make people behave substantially sustainable in their own interest for their own well-being. Such an arrangement is possible in some, but impossible in other cases, e.g. due to uncertainties. The example of the EU-wide obligatory inclusion of bio-energy in petrol for individual mobility and its relative withdrawal shows that the authorities were not able to foresee the effects of this measure on biodiversity and food issues due to land-use change. Even when such arrangements are possible, they are often not realised due to reasons that oppose such a pro-SD arrangement, as can be seen with the example of kerosene taxation. Furthermore, the efficacy of arrangements that only rely on the motivation to increase one's own well-being has been questioned (Kerr et al. 2011). As stated above, efficiency-improvements have largely shown to be ineffective and consistency attempts based on technology improvements will possibly be lacking for too many years in various fields.

In line with the Brundtland Commission that focused on the needs of unborn and the world's poor, i.e. individuals the furthest away from a current European perspective, sustainable behaviour can also be motivated by the wish to care for sometimes even very distant people. One major expression of this normatively sustainable behaviour is the commitment to principles of justice translated into practical behaviour by e.g. buying fair-trade products or engaging in pro-environmental behaviour. The CA's distinction between self-oriented and other-oriented goals can acknowledge such an intrinsic motivation for SD and can herewith differentiate between normatively and substantially sustainable behaviour.

- * Ad (2): Needs, if understood in an abstract and categorical way (Max-Neef (1991) uses subsistence, protection, affection, understanding, participation, idleness, creation, identity, freedom, and transcendence), can be seen as a fundamental structure of the multidimensional set of capabilities. All functionings can be understood in their capacity to realize different needs, e.g. cycling to work contributes to realizing the (second author's) needs for subsistence, participation, idleness, identity and freedom. This constitutes a direct terminological link to the Brundtland definition of SD (even though 'needs' was understood differently by the Brundtland Commission). To achieve functionings, one requires personal abilities, such as skills, knowledge, motivations; if successful, this realisation meets needs, is gratifying, induces well-being, and increases quality of life (Rauschmayer et al. 2011). At the same time, the capability approach directly considers goods and resources as well as social, institutional, or environmental structures (elements of the behavioural

context individuals are facing) that are relevant for meeting needs and herewith for increasing one's quality of life. Meeting needs today and in the future in order to realize a decent quality of life, i.e. realizing well-being and commitment goals alike, requires a material and social basis. If today's people want to behave normatively and substantially sustainable, i.e. if they want to include the needs of future or distant people in their decision considerations, then they will have to consider the impacts of their behaviour on the material and social basis of other people's life (Leßmann & Rauschmayer, 2013). By considering this material and social basis, the capability approach not only offers mentioned terminological link to meeting 'needs', but a direct substantial link to the goal of SD as well.

Mostly, the capability approach has been used to analyse where governments can redistribute resources or alter relevant conversion factors in order to enhance the capability set of under-privileged people. Said differently, often, the aim of policy measures motivated by CA-analyses has been an extrinsic empowerment, an empowerment that builds on resources and conversion factors external to people. The poverty-related applied research by Susan Pick shows (Pick & Sirkin, 2010) that, by including intrinsic empowerment, i.e. the enhancement of capability-sets by changing psychological factors, the CA can still increase its potential. Realizing this potential is still more important for sustainability issues as the motivational factors are essential for sufficiency strategies.

3.3 Contributions and flaws – the example of 'breaking the poverty circle' / participatory development work

This section introduces an experience-based, theoretical model that explains the success of intrinsic empowerment in poverty-reduction campaigns (Pick & Sirkin, 2010). It is a first step to building a CA-based model that accounts for normative sustainable behaviour and which we will develop in section 5. The original model combines the capability approach with the theory of planned behaviour assuming that persons consciously choose behaviour out of a set of perceived real opportunities while personal abilities and self-perception are essential variables in perceiving opportunities and in choosing options (cp. Figure 2).

Pick and Sirkin show how the capability approach has been used to understand the driving factors behind successful community development in Mexico – working particularly with women and poor groups of society (ibid.). Already 25 years ago, Susan Pick had identified psychological barriers as the main reason for the non-implementation of family-planning measures in Mexico (ibid.). When subsequently addressing these barriers through NGO-based educational work, she has noticed that women participating in such educational groups started to behave differently, not only in the area of family planning, but also with respect to the educational system or their own economic activity. Intrinsic empowerment

not only increased their capabilities in one area, but also increased their opportunities in other areas of life: new skills trained in the groups induced a changed behaviour, which led to a self-perceived different personality and self-efficacy, which – in turn – is the basis for recognizing new opportunities in other areas of life. Figure 2 redrafts this feedback loop: Women recognized specific opportunities, such as visiting doctors who teach family planning methods, but did not select the behaviour to see these doctors mostly because of high socio-psychological barriers. Training allowed them to overcome these barriers and to see the doctor. This (and further changed behaviour) gave them also another image of themselves: different personal norms, higher self-efficacy, and different attitudes towards family or sexuality. This new image empowered them intrinsically to see and create new opportunities in areas in which they haven't seen them before, such as children education or business, which in turn led to changed behaviour and herewith to a higher well-being.

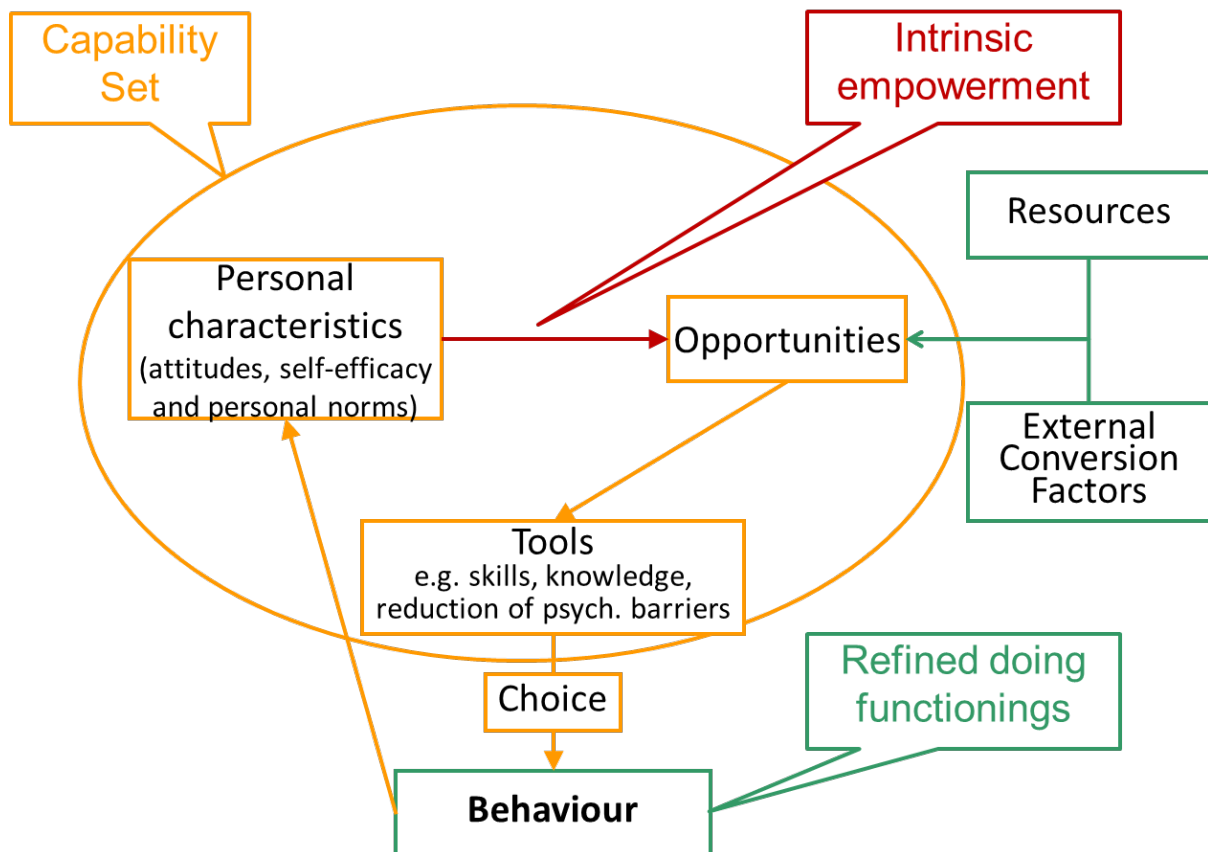


Figure 2: Intrinsic empowerment out of poverty (changed from Pick & Sirkin, 2010)⁹

Such intrinsic empowerment programs have enabled the participants to differently perceive and make use of available resources, and herewith have facilitated the self-enhancement of the participants' capability set.

⁹ Tools and personal characteristics are usually (e.g. Robeyns 2005) part of the conversion factors. Here, external and internal conversion factors have been separated to highlight the internal dynamics.

The feedback loop described above might contribute to make such changes more durable in the issue of poverty where the motivation for changed behaviour is self- (or family-) regarding. It does not tell much, though, about the substantial sustainability in the sense of the Brundtland definition of SD. Here, the motivation clearly lies in other-regarding interests, i.e. caring for the world's poor and future generations. This highlights a flaw in the application of the CA – as a participatory method, it is mostly used in situations where the world's poor care for their own well-being. Therefore, the intrinsic empowerment model developed by Pick and Sirkin helps to understand how long lasting, widespread changes towards increases in individual well-being can be achieved (which is very important in countries with widespread poverty). But it helps little to account for altruistic motivational factors for normative sustainable behaviour. Therefore, a translation of this model to include sufficiency-oriented motives in industrialized countries requires some modifications. In the following we draw on studies from environmental psychology to get more insights into possibilities for strengthening other-regarding-driven motivation, independently of well-being driven motivation.

4 Steps to extend the scope of the capability approach linking it to psychology

4.1 Variables influencing behaviour shared by various psychological approaches

Behaviour that can be considered substantially sustainable often contradicts individual interests, particularly in the short and middle term (Fuhrer & Wölfling, 1997). To take responsibility for, bear the related individual costs of and act in coherence with the common good, can be called pro-social behaviour, motivated by altruism (Stengel, 2011, Hopper & Nielsen, 1991, Fuhrer & Wölfling, 1997). A core characteristic of altruistic motivations is that most people would approve altruistic norms to govern a particular behaviour, but not everybody is behaving according to this norm (Hopper & Nielsen, 1991). Following Frey, we can assume that people who are convinced that sustainable behaviour is a good thing, i.e. who are intrinsically motivated, have a more stable substantial sustainable behaviour than those who are not convinced (Frey et al. 1996). Convincing people, though, does not make them behave sustainably, as (altruistic) motives do not become relevant for (pro-social) behaviour automatically (ibid.).

What are the psychological reasons behind (pro-social) behaviour? A number of concepts from psychology have been applied to questions of environmentally related behaviour (Osbaldiston & Schott, 2012, Steg & Vlek, 2009, Matthies & Homburg, 2001). These particularly include the theory of planned behaviour (Fishbein & Ajzen, 1997, Ajzen, 1991),

the norm-activation model (Schwartz, 1977, Schwartz & Howard, 1981), but also a model on the influence of habits by Triandis (1977) and the ipsative theory of action (Foppa, 1989). Matthies et al. screen the different theories for the factors considered most important for environmentally friendly behaviour and state numerous studies stressing their importance (Matthies et al. 2004, cp. Kaufmann-Hayoz et al. 2010). Named variables include:

1. the personal environmental norm (feeling of obligation for environmentally friendly behaviour)
2. social norms (perceived behavioural expectations of others)
3. awareness of problem, awareness of consequences
4. cost/ benefit expectations
5. awareness of consequences of behaviour/ ascription of responsibility
6. perceived personal agency/ behavioural control
7. habits

In the context of analysing and strengthening sustainable behaviour based on altruistic motives, the theory of planned behaviour and the norm-activation model of Schwartz appear promising as they consider norms and values as important variables influencing behavioural choice (cp. Matthies, 2004). Particularly the Schwartz model has been successfully applied to case studies on altruistic behaviour. Within both models the individual behaviour is thought to depend on the intention of a person to behave in a certain way (e.g. Ajzen, 1991, Schwartz, 1977). This implies that we focus our analysis on behaviour that is chosen consciously. Behavioural habits are therewith not in the centre of attention of the model¹⁰.

4.2 Towards altruistic motivations for behaviour

4.2.1 Core variables: personal and social norms

The theory of planned behaviour proposes behavioural intentions as crucial variables deciding on actual behaviour. Intentions are supposed to be determined by three aspects:

¹⁰ Habits are of course very important elements of behaviour. But behavioural change and motivations for behaviour can hardly get explained through habits due to the unconscious selection of such behaviour. One might of course assume that in the beginning unconscious behaviour was consciously intended before turning into habits (Schäpke & Rauschmayer 2011, Aarts, 1996). Consumer awareness programs will address the challenge of bringing unconscious behaviour back to consciousness again and create new behavioural alternatives (Kaufmann-Hayoz et al. 2010).

(1) the attitude towards the behaviour, (2) the subjective norm (as the perceived expectations of relevant others) and (3) the perceived behavioural control (Matthies et al. 2004). The individual attitude towards a behavioural alternative is influenced by its anticipated positive and negative consequences. In this understanding, altruistic behaviour is performed if there is a strong subjective norm expecting altruism and if the persons holding this norm are of great importance to the actor. A precondition for this is the perception that a person is able to carry out the considered behavioural alternative.

The norm-activation-model of Schwartz and Howard (1981) offers additional explanatory power, as it looks more deeply into the different norms individuals hold. The model explains how norms are activated in certain situations, how they are translated into personal responsibility and finally lead to pro-social behaviour (Fuhrer, 1997, for empirical testing e.g. Hopper & Nielsen, 1991, Hunecke et al. 2001, Joireman et al. 2001, for a comparative discussion see Stern et al. 1999). Schwartz and Howard understand behaviour as motivated by the wish to act in a norm-concordant way. Schwartz and Howard differentiate between general ethical norms, personal and social norms (1981). General ethical norms are translated into personal norms during the process of socialisation. Various personal norms together form cognitive structures at a high level of abstraction. To direct concrete decisions about how to behave these abstract personal norms have to be activated and evaluated with regard to the specific situation (Fuhrer & Wölfling, 1997). They result in feelings of individual moral obligation to act in a certain way. Social norms in turn are based on expectations of other persons on how the individual should act in a given situation and do as well influence the decision on which behaviour to carry out. Pro-social behaviour can be motivated by personal or by social norms, i.e. if a person believes that acting pro-socially is a good thing/ is right or if the individual is confronted with expectations of others to behave pro-socially (Stern et al. 1999). To better understand pro-social behaviour via the norm-activation model we take a closer look at the behavioural choice process assumed in the model.

4.2.2 Process of norm-activation for pro-social behaviour

Schwartz and Howard (1981) conceive normative decisions as being reached in a four-stage process (cp. Figure 3):

(1) Attention stage – Specific, problem relevant feelings and cognitions are being activated by situational clues. This happens in three steps. At first the individuals check if there is the need to act at all. With regard to sustainability problems, they first evaluate the situation whether it is dangerous or challenging to humans or the environment (Fuhrer & Wölfling, 1997). Second, they define those existing behaviours that are able to cope with the problem.

Third, they evaluate their individual ability to carry out relevant behaviour (perceived behavioural control).

(2) Motivation stage – In case that an individual possesses the ability to carry out such problem-relevant behaviour, different implications of the behaviour are considered: physical, material as well as monetary implications on the one hand, and ethical and social consequences on the other hand. Ethical consequences refer to the internalized personal norms of a personal, while social consequences relate to the social norms and expectations of other persons with respect to the considered behaviour. Both norms create individual and case-specific moral obligations.

(3) Evaluation stage – The individual evaluates the consequences of behaviour, considering case-specific aspects like time and money as well as person-specific aspects (like the importance of the personal norms involved for the self-concept of the person) (Fuhrer & Wölfling, 1997). A violation of a personal norms results in feelings of shame, upholding personal norms in feelings of pride (Hopper & Nielsen, 1991). Violating social norms can result in feelings of guilt, anger or fear with regard to the anticipated reaction of the other persons on the individual's behaviour (ibid.).

(4a) Denial – A conflict arises when the various positive and negative consequences of the considered behaviour are evaluated as more or less equally important. The individual then starts a process of redefining problem and moral obligation. Here the different situational factors can get re-evaluated, e.g. the need for action can get denied, as well as the personal ability to act or the moral obligation to act (Fuhrer & Wölfling, 1997).

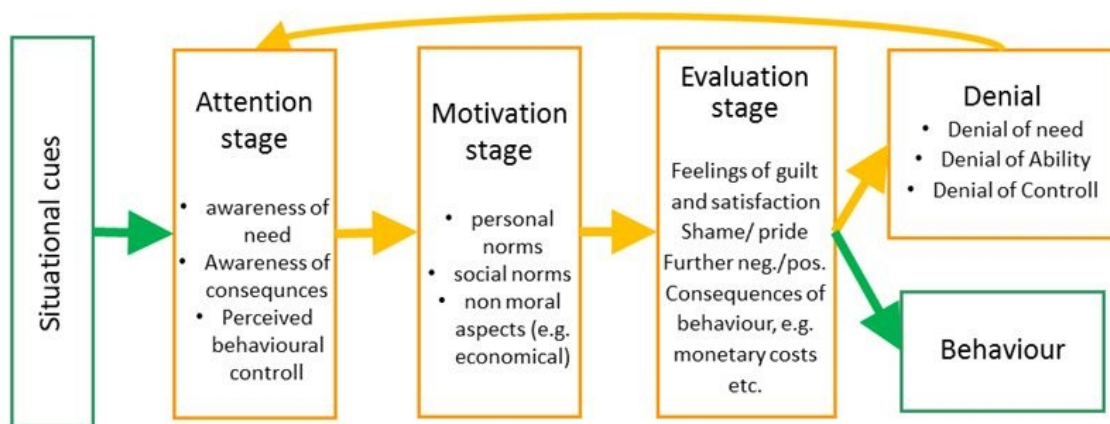


Figure 3: Graphical representation of the norm-activation model (Klöckner & Matthies 2004, strongly modified).

(4b) Behaviour – in case of no-denial, a (pro-social) behaviour is being manifested (Fuhrer & Wölfling, 1997). A self-interested behaviour is manifested if no altruistic personal or social

norms are activated (e.g. due to missing awareness of consequences or missing altruistic norms) or if the individual does not feel responsible for the consequences and/ or if the related personal costs of a pro-social behaviour are evaluated higher than the moral obligation to act in a pro-social way.

4.2.3 Preconditions of pro-social behaviour

As stated above, a core characteristic of altruistic behaviour is that most people would approve a norm governing a particular behaviour, but not everybody is behaving according to this norm (Hopper & Nielsen, 1991). In accordance to this, newer studies (e.g. Kals & Russell, 2000) show that the majority of European citizens have a strong altruistic motivation for global environmental protection. Empirically, this motivation does significantly influence upon the concrete willingness to conduct environmentally friendly behaviour (Matthies et al. 2004). Nevertheless and following the norm-activation theory, empirical research showed that a transmission of personal norms into pro-social behaviour has certain preconditions – personal norms increasingly lead to pro-social behaviour the stronger the awareness of (future) consequences and the individual attribution of responsibility are (Joireman et al. 2001, De Groot & Steg, 2009, Fuhrer & Wölfing, 1997, cp. Bierhoff & Montada, 1988, Schwartz & Howard, 1981, but Bamberg & Schmidt, 2003).

Additionally the influence of the perceived ability to select behavioural alternatives (i.e. size of the capability set) on the perception of individual responsibility was highlighted – if persons feel strongly predetermined in behavioural possibilities they feel less responsible for the consequences of their actions (Heberlein, 1972). In connection to this, the perceived behavioural control is a crucial variable in various different social-psychological models of behaviour (introduced by Bandura, 1977). A lack of belief in the individual ability to carry out a behavioural alternative significantly reduces the motivation to behave in a certain way as well as the feeling of moral responsibility to do so. Studies have shown that in cases of high anticipated personal cost of environmentally friendly behaviour there is a strong tendency to recalibrate personal norms. In this way the willingness to environmentally friendly behaviour is reduced (De Groot & Steg, 2009, Tyler et al. 1982).

In a next step we include the knowledge gained from environmental psychology into an integrated model to understand motivations for behaviour. This model links the CA and the norm-activation model and puts an emphasis on the freedom to choose behavioural alternatives as well as on the awareness of behavioural consequences as key influence factors on pro-social behaviour.

5 An integrative model - Linking the capability approach and central variables of psychology

Here, we combine the interpretation of the capability approach developed by Pick and Sirkin (2010) with the norm activation model of Schwartz and Howard (1981). To recapitulate figure 2: the capability set of a person, being the behavioural alternatives a person is free to choose from, consists of the opportunities the person has to act, their skills, attitudes and personality. The opportunities of a person depend on the usage of external resources and conversion factors. We now extend the bike example mentioned above: The capability to ride a bike depends on resources (e.g. possessing a bike) and external conversion factors (e.g. a path). Recognizing the opportunity to ride a bike depends on the person's attitudes, their perceived self-efficacy as well as their norms with regard to riding a bike. Using the opportunity asks for certain skills and knowledge (e.g. the skill to ride a bike). A person decides to carry out a certain behavioural alternative to realize their well-being or agency goals. Two feedback loops arise from a successfully achieved behaviour: 1) it feeds back on the person's perceived self-efficacy, their awareness of the problem and their attitudes towards a specific behaviour. 2) In a second feedback loop, behaviours influence the resources and conversion factors and therewith the opportunities a person has.

In addition to Pick and Sirkin's version of the CA, the new model represented in figure 4 further differentiates the different steps involved with regard to the activation of norms particularly relevant for choosing pro-social/ altruistic behaviour. The choice to behave in a certain way (e.g. to bike) or not depends on the one hand on the behavioural alternatives, which are consisting of the opportunities (resources and conversion factors) a person has, and the skills they can apply to make use of them (e.g. is a car, a public transport system etc. available and can they use it?). On the other hand the behaviour's likely consequences are evaluated against moral and non-moral criteria, such as time, money, and the importance of the personal norms involved for the self-concept of the person (is biking good/bad, expensive/cheap? Does it correspond to their self-image?). But the consideration of pro-social behavioural alternatives (they want to bike out of their care for others and not for their own interest) has attention and motivation as conditions: In the attention stage, specific and problem relevant feelings and cognitions have to be activated (they consider CO2 emissions of individual mobility a problem) and, the person has to be aware of their own ability and responsibility to behave in a pro-social way (they can go by bike to work). In the motivation phase as the second condition to perceive a specific behaviour as a relevant opportunity to behave pro-socially, a specific moral obligation is to be created. This obligation is a function of the economic, moral and social costs of behaviour (they should care for the environment, for their image, for their expenses when going to work). Then the

consequences of behaviour are being evaluated against the developed moral obligation to behave pro-socially. This evaluation either leads to feelings of pride or gratitude for behavioural alternatives in line with personal or social norms or to feelings of shame, fear and guilt for behaviour opposing these norms. If this calculation leads to an ambivalent result, a redefinition of the problem and the moral obligation is possible, e.g. via denial, justification (in fact, it does not matter that they take the car, as all others go by car as well). Finally, behaviour is being manifested, pro-social or not (cp. Fuhrer & Wölfling, 1997).

Pro-social behaviour therefore depends on the relevant personal and social norms, the opportunities and skills as well as on the awareness of the necessity, the responsibility and the self-efficacy to comply with these norms. The capability set, as the freedoms of a person to act, depends on the characteristics of this person, her opportunities and tools. Carrying out a chosen behaviour or denying the need to carry it out impacts on the personal characteristics. Carrying out a chosen behaviour also feeds back to the behavioural context and may change the behavioural opportunities (increased cycling leads to higher traffic security for cyclists).

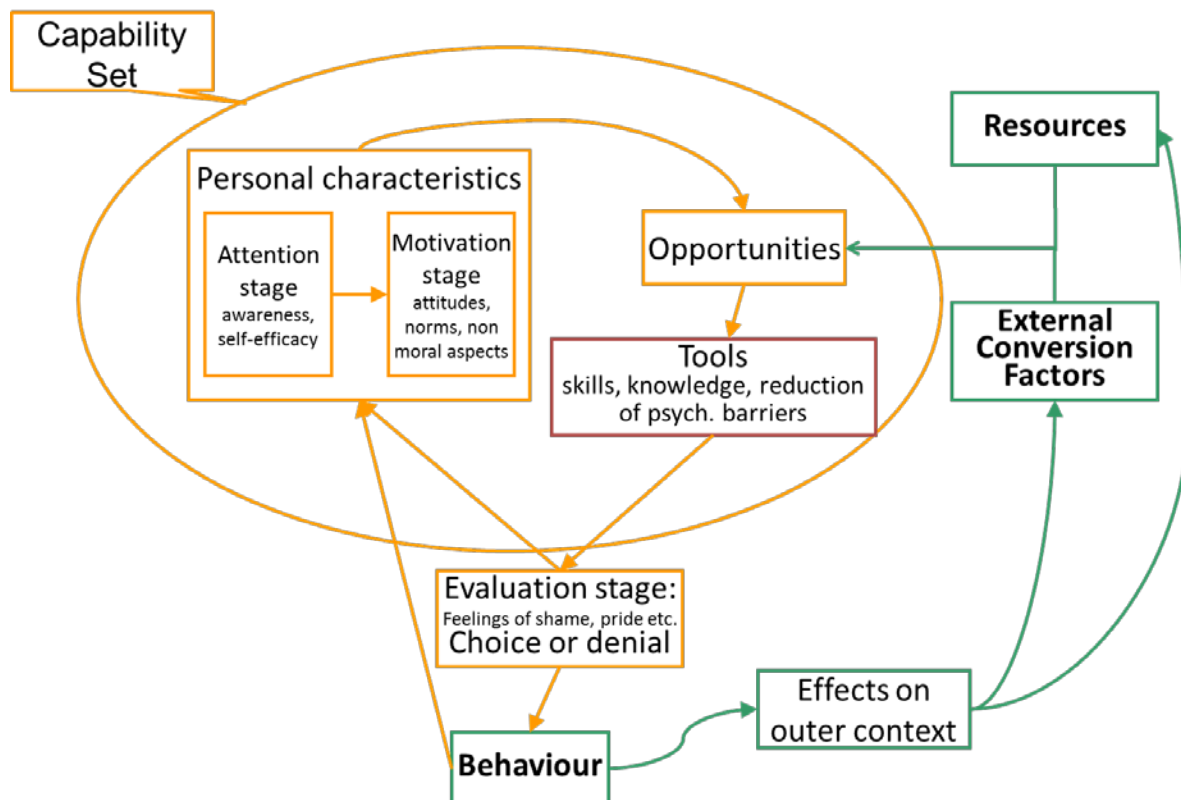


Figure 4: Dynamic norm activation capability model

6 Concluding discussion: The freedom to behave pro-socially

Recalling chapters 1 and 2, SD strategies appear to be particularly promising to have a lasting, positive effect on strengthening sustainable behaviour, if they address altruistic and self-interested motivations for behaviour alike. Whereas this combination has not been a problem for current psychological models (cp. Steg & Vlek, 2009), those models cannot be used for assessing effects of strategies on societal target variables such as quality of life. Models that are currently used for such assessments, though, are mostly based on self-interested motivations or do not take into account differences in motivations at all (e.g. Schleich & Mills, 2011). The CA which is currently used for societal assessments of different kinds of policies understands behaviour as directed to meet self-interested and other-interested goals. It therefore offers two different entrance points for empowering people to “live a life one has reason to value”, including also the altruistic reasons for behaving sustainably, i.e. including normative sustainable behaviour. Nevertheless the CA gives little information on the importance of altruistic reasons or of pro-social behaviour within this “life one has reason to value”.

The dynamic norm-activation capability model developed in the preceding section allows designing and assessing SD policies and instruments with regard to three different dimensions, i.e. referring to psychological elements of SD policies, to a more holistic understanding of SD, and to the impacts of SD policies on the societal target of quality of life. The following explanations are a starting point for discussions on how to further develop and use the model.

Including the strengthening of pro-social, sustainable behaviour

The model allows assessing to which extent a sustainability policy addresses the psychological driving factors of pro-social behaviour (like awareness building or strengthening feelings of self-efficacy and responsibility). It focalises on the psychological empowerment of citizens and consumers as it allows analysing whether a policy measure increases the capability-set to behave sustainably with regard to the use of resources and conversion factors. The model can be used to derive interventions that strengthen these effects and are normatively and substantially sustainable. Matthies et al. (2004) differentiate between intervention approaches that focus on external and at internal variables. External ones include technical modifications as well as incentives and punishments: they change the situation, i.e. the external conditions of behaviour. Internal variables are differentiated into norm- and knowledge-centred approaches. The latter strengthen problem or action-knowledge while the former focus on the activation/ strengthening of norms through campaigns or role-models. This differentiation may play a role in the design of effective policies including sufficiency principles. It might even build a basis for modelling

interventions that allow the further development of personal norms to more consideration of others (cp. Wilber, 2000).

SD understood as capabilities of those living today and in the future

The dynamic norm-activation capability model suggests understanding sufficiency-oriented SD policies not only as restrictions in resource use, but as shifts of the capability-set towards goals motivated by the well-being of others. Individuals subject to such policies might lose self-interested capabilities while gaining the freedom to achieve other-interested goals. We assume (with no empirical validation so far) that feedback effects occur for sustainability issues as they have appeared for poverty eradication, as described in section 3.3. This implies that shifting the freedom (or nudging citizens, cp. Thaler & Sunstein, 2008) towards sustainability goals and achievements will have a self-reinforcing aspect. Again, effects of policies supposedly have positive impacts on normative and substantial sustainability.

Achieved well-being/ quality of life

The model not only allows psychological analysis, but includes – with the concept of capabilities – a variable that has been used for decades to describe societal progress.¹¹ It therefore allows indicating the potential impact of a policy on capabilities and functionings of a person or group of persons. Including psychological and external variables, its application furthermore allows identifying internal and external sources for shifts in capability enhancements or detractions. This might be done by answering the question if the policy is likely to foster/ initiate a process of intrinsic empowerment, or not: A process that is increasing the capabilities and functionings available to a person and therewith the achievement of well-being (and agency) goals. Through time series, one might even get answers as to how long lasting (intrinsic) empowerment for increasing capabilities and functionings could be achieved.

Nevertheless, the model also shows limitations of strengthening sufficiency strategies that propagate e.g. the norm of voluntary simplicity. Freedom to choose a behavioural alternative is an important factor influencing the likeliness that a pro-social behaviour is chosen. To understand empowerment as increasing the capability to behave only in a pro-social way appears like a contradiction to the original idea of the capability approach itself. Propagating altruistic motives for pro-social behaviour may stimulate reactance and lead to opposed effects. It is not evident, though, how to design SD strategies that foster capabilities and the likeliness to behave pro-socially without substantially interfering with the freedom of people. Here, the concept of nudging (Thaler & Sunstein, 2008) might give some answers.

¹¹ The latest upshot is the UNDP 2011 report on sustainability and equity (UNDP, 2011).

New well-being model

The dynamic norm-activation capability model encompasses variables relevant to the well-being of actors. On the one hand this includes normative goals of guaranteeing freedoms to live a life one values. And on the other hand it addresses variables fostering the willingness of actors to behave pro-socially and adopt a sufficientarian lifestyle. It therefore may form the basis for a new well-being model. The new developed model does not understand behaviour intended to realize self- or other-regarding goals as opposites, but offers ways to strengthen individual capabilities that link self- and other-regarding goals and thereby increase the overall well-being.

We assume that people have the goal to care for other people: Policies designed with underlying models that assume self-interested motivations only or that do not account for motivations, strengthen the importance of band-wagon or free-rider effects that are decreasing the probability of pro-social behaviour (Molinsky et al. 2012). Models that assume other-regarding goals and that allow assessing the achievement of these (together with self-regarding goals) enhance the freedom of people to behave sustainably: normatively *and* substantially.

7 Outlook

The aim of the paper was to develop a model that explicitly includes the normative sources of sustainable behaviour and that can be used to assess changes in politically relevant variables, such as quality of life, in order to be able to assess impacts of public policies. Much has still to be done to specify and improve the model; open questions are e.g. the following:

- Is the norm-activation model the appropriate model to analyse normatively sustainable behaviour?
- Is the link between the norm-activation model and the CA via the theory of planned behaviour conceptually solid and can it be used empirically?
- How should the capability set, i.e. the politically relevant variable, be measured in the domain of sustainable behaviour?

Despite the openness of these questions, we have shown that such link is conceptually feasible and has the promising potential of including sufficiency strategies for SD into analyses of sustainability policies.

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