Individual production of social well-being
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3.1. Introduction

In the first two chapters, some questions concerning the conceptualisation of ‘quality of life’ and subjective well-being and the measurement of its concomitants were expounded. In Chapter 2, we were introduced to the field of quality of life studies. Its core concern has been identified, followed by the assertion that at present quality of life studies is insufficiently equipped to deal with this core task. I have argued that the field needs an individual level behavioural theory that explains how objective conditions affect subjective well-being, in a way that does justice to the agency aspect of well-being. The search for a suitable theory of this kind then brought us to the rational choice approach, which appeared well-suited for our purpose but for the lack of a complementary theory of goals. Several theories of goals, from diverse disciplinary perspectives were then examined, and our conclusion was that there seemed to be no ready to use theory of goals to complement the rational choice model of the realisation of individual well-being. A few theories of goals might hold the potential to be elaborated into a suitable theory for our purpose, however, and among these is Lindenberg’s (1986, 1993, 1996) Social Production Function theory.

This chapter is devoted to a close examination of Social Production Function (SPF) theory. I chose this theory, that was already superficially introduced in Chapter 2, from the set of suitable candidates for the task of achieving progress in quality of life research. In the present chapter, the theory in its basic form as well as its main applications and extensions thus far are closely scrutinised and it is assessed what points should be given priority in elaborating, improving or redressing the theory.

In section 3.2., the reader’s patience is called upon to suffer a repeated exposition of the core of SPF theory. Although the main notions were already discussed in Chapter 2 (2.5.7.), I will presently go into much more depth about these. The second part of this section is used to describe the origin and initial purpose of SPF theory. In case of this theory, it is worthwhile to give some attention to the process through which it came into being, as its early history appears to account for some of the theory’s (seeming) imbalances and ambiguities that will be identified later in this chapter.

In section 3.3., the main applications of SPF theory that have appeared over the past few years
are reviewed. In this review, three questions will be focussed upon: how the theory has been used, to what extent the theory itself was tested, and to what extent the empirical evidence from these studies supports the basic model of SPF theory.

Following the discussion of the applications and extensions of SPF theory thus far, I will in section 3.4. proceed to consider what these later additions to the theory have contributed to the conceptualisation and definition of the theory’s universal and first order goals. It is argued then that the conceptualisation and, consequently, the definition of these goals are still unsatisfactory.

Besides the conceptualisation of the first order and higher goals, there are some more respects in which the theory wants further elaboration. These are discussed in section 3.5. For its application to quality of life studies, a system of indicators that reflect the production factors at the lower levels of the hierarchy of goals should be elaborated, that can be used for linking objective conditions to subjective well-being. Also regarding so-called metagoals and cognitive aspects much remains to be done.

The conclusion of this chapter, section 3.6., then summarises the present state of SPF theory and lists the main tasks that are yet to be done. From this diagnosis, the specific research questions for the study reported in subsequent chapters are derived.

3.2. The basic form and initial purpose of Social Production Function theory

In the previous chapter the main features of SPF theory were already sketched. However, now that the examination of different theories of goals has led to the decision to elaborate SPF theory in order to prepare its application to Quality of Life studies, a more thorough exposition of the theory is warranted.

Basically, SPF theory asserts that people produce their own well-being by trying to optimise, within the constraints they are facing, the achievement of two universal goals: physical well-being and social approval. The core of SPF theory (Lindenberg 1986, 1992, 1993, 1996, etc) is succinctly summarised by Ormel et al. (1999, p. 67), who state that the “central components of SPF theory are (a) the link between the realisation of goals and well-being, (b) explicit definitions of universal and instrumental goals, and (c) substitution among instrumental goals according to cost-benefit considerations”.

Located within rational choice theory, SPF theory builds upon the distinction of universal and individual preferences made in Stigler and Becker’s (1977) household production theory. They assumed that universal goals can be described in terms of a single utility function, invariant across individuals, but that systematic differences exist in the ways these individuals achieve well-being, mirroring differences in resources and constraints of the individual’s situation. Lindenberg saw that the usefulness of distinguishing between universal and individual preferences depends on the specification of the universal goals or preferences. In SPF theory, he specified the universal goals as physical and social well-being. Physical well-being is basically the major goal that has been used in economic theory, while social well-being has been the major goal in most sociological theories regarding human strivings. Indeed, the identification of physical and social well-being as universal human goals was already proposed by Adam Smith (1759 [1976], p. 116) and has since then generally met with broad acceptance. For the notion of social well-being as a universal human goal Lindenberg also claims support among others from e.g. Marshall 1920, Parsons 1937 and Goode 1978. However, the mere identification of these two universal goals gives only little guidance
concerning the interpretation or modelling of concrete situations, or the derivation of particular hypotheses about concrete preferences. That is why, in SPF theory, Lindenberg went one step further and proposed for both of the universal goals the main forms in which these may be realised: the *first-order instrumental goals*. Physical well-being and social approval are assumed to consist of respectively two and three so-called first-order instrumental goals.

In contrast to the convention in economic theory, to regard physical effort as a cost (which would imply that minimisation of physical effort would lead to maximal physical well-being), SPF theory asserts that people also need some degree of arousal to experience physical well-being. Wippler (1987), building on Scitovsky (1976), identified *stimulation* and *comfort* as the first order goals for physical well-being. Comfort refers to absence of thirst, hunger, pain, fatigue, et cetera. Stimulation refers to activities that produce arousal, including mental and sensory stimulation and physical effort. The relation between stimulation and physical well-being is assumed to approximately follow an inverted U-shape. In opposition to Scitovsky and Wippler, Lindenberg (1996, p. 173) states that the utility function of arousal is not single peaked. He rather claims that people may in most states of being, except at extremely high or low levels of comfort and stimulation, enjoy both an increase in stimulation and in comfort: “[t]he organism seems to receive pleasure from both a reduction in arousal (i.e. from increasing comfort) and from and increase in arousal (i.e. from increasing stimulation) within a large range of arousal”.

For social well-being, Lindenberg proposes status, behavioural confirmation and affection as the three first order instrumental goals. Status refers to a relative ranking (mainly based on control over scarce resources). Behavioural confirmation is defined as the positive feedback on behaviour by others (the feeling of having done ‘the right thing”). Behavioural confirmation does not always need direct reinforcement of the behaviour: it can also take the form of self approval, when behavioural norms of relevant others are internalised. Affection includes love, friendship and emotional support. All three instrumental goals are assumed to have decreasing marginal value for the production of social approval.

SPF theory has several characteristic features. The three characteristics that are most important for our purpose are the *hierarchical ordering of goals*, the *role of the relative price effect* (or: the mechanism of limited substitution) and the opportunity to compare production factors with regard to their *relative efficiency* in the production of well-being.

The first characteristic is the hierarchical ordering of goals, with the ultimate goals at the top, and instrumental goals at lower levels, linked by production functions that specify the relationship between lower order and higher order goals. Social production functions thus basically specify for a particular (category of) individual(s) how well-being is produced. The idiosyncrasy or situation-specificity of the production functions increases the lower one goes in the hierarchy. The *production factors* (or: means of production) at the lower levels of the production functions include both *activities* and material and immaterial *resources*.

At the levels below that of the five first-order goals, or first-order means of production

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1 In the analogy of the production function, which SPF theory shares with the basic needs approach and to a lesser extent also with Sen’s functionings and capabilities approach, SPF theory invokes the concepts of complementarity and substitutability of production factors and the notion that the contribution of resources and activities to the achievement of well-being depends on how and in what combinations they are employed.
(Lindenberg 1996, p. 175), three more kinds of means of production are sometimes distinguished. Firstly, there are the *second-order means of production*, among which a distinction can again be made between resources that need to be combined with certain activities in order to contribute to the realisation of the universal goals, and resources that contribute to the individual’s social or physical well-being just through the fact that they are there; the latter are in then referred to as endowments. Secondly, there are the *third-order means of production*, which Lindenberg defined as “those necessary for executing activities and obtaining endowments. Thus, in the instrumental hierarchy, they are below the level of second-order means of production. Examples are physical and mental capacities, social and other skills, time, effort, money” (ibid., p.175).

In other words, if a person lacks the necessary resources for the realisation of a higher level goal, the production of these resources can become an instrumental goal in itself: a second-order instrumental goal. Thus, activities may immediately satisfy an instrumental goal (production activities), they may increase the potential for future production (investments) or both. Thirdly, there are the fourth-order means of production: “those that can be mobilised when changes in production capacity ask for substitution. These 'latent' resources are analogous to credit or savings. For example, when a partner dies, part of the lost production capacity for affection may be regained by mobilising kinship ties that have remained dormant for some time” (ibid., p. 175).

However, in many instances, particular resources belong at more that one of these levels or orders. For example, money and physical fitness are both second- and third-order means of production, and dormant social ties may still contribute directly to the realisation of status. In this study, I will not systematically distinguish between endowments and other resources nor between second-order and higher-order means of production. Making such distinctions may be relevant in particular applications of the theory, but the present study takes a more general and exploratory approach (in fact concentrates on elaborating more ‘primitive’ elements of the theory). In the present study, I found it more adequate to leave further distinctions than between (aspects of) the first-order goals and their main relevant production factors aside for the time being.

Figure 3.1. may clarify the relations between the different levels of goals in SPF-theory.

The second characteristic of SPF theory is the role of the relative price effect, i.e. the importance of substitution mechanisms. Instrumental goals are assumed to be substituted depending on their relative cost. For example, if opportunities for achievement of status are decreasing (as often happens when ageing), a person is likely to increase the production of affection and behavioural confirmation if those are relatively easier (“cheaper”) to produce. In contrast, one might also expect that some high-paid professionals, whose opportunity costs are high, may find it increasingly costly to invest in the realisation and maintenance of affection, and may therefore shift ever more of their efforts towards the - relatively cheaper - production of status and behavioural confirmation in their job (the workaholic-phenomenon).

Substitution can also occur at lower levels: if opportunities to produce e.g. status with

\[2\] In fact, even the first-order goals may feature as lower order means of production in particular production functions. For example, the status of a person in high position (say, a politician or mayor) may help him to get scarce tickets for a soccer final or a pop-concert which an ‘average person’ would not have been able to obtain; going to the soccer match or the pop-concert then being a means of realising stimulation.
conventional resources (e.g. occupation) decrease, people may try to substitute alternative resources to produce status. When a person, in consequence of discharge or retirement, can no longer obtain status through paid work, he may try to maintain his former level of status by compensating the loss of work through increased efforts in sports, cultural consumption or voluntary work. Or, when a pupil at school finds out that he lacks the necessary learning capacities to obtain behavioural confirmation from the teachers for conforming to their norms for ‘good’ behaviour and performance, he may resort to rebellious or subversive behaviour that will bring him behavioural confirmation from some of his fellow-pupils.

It is important to note that SPF theory does not allow unlimited substitution. The instrumental hierarchical ordering of goals presupposes limits to substitution, and the higher in the hierarchy, the narrower to possibilities to substitute between goals. For instance, a person may freely substitute a game of tennis for an afternoon of fun-shopping as means to realise stimulation, but he needs some minimum level of stimulation for physical well-being and no realistic level of comfort can compensate that (e.g. Ormel et al. 1997, p. 1055; Van Bruggen 1997).

A third important feature of SPF theory is that it provides opportunity to evaluate the ‘efficiency’ of alternative production factors. In SPF theory, the most efficient means of production are multi-functional activities: those that combine production and investment and those that satisfy multiple higher order goals (Ormel et al. 1996). Thus, when comparing two alternative ways of producing e.g. stimulation (i.e. two substitutes), not just the expected ‘output’ or benefits in terms of stimulation should be considered, but one must consider the
cost-benefit ratio of the two, which includes not only the benefits in terms of stimulation, but also the costs and benefits of the alternatives in terms of comfort, status, behavioural confirmation and affection; and this not only for the immediate results but also in terms of the investment value. This may sound highly complicated, and it is indeed, when actually trying to assess with precision all costs and benefits of a particular action. However, in a general sense, the notion of multi-functionality is not so hard to apply, and it appears not very difficult to assess the most important costs and benefits of substitute production factors approximately. It is, for example, easy to see the approximate differences in the cost-benefit ratio of watching one’s favourite tv-show or playing a game of squash for stimulation. The first alternative is obviously less costly in terms of comfort and (probably) of money, but the benefits of the latter include, besides stimulation, an investment in one’s physical condition, an investment in one’s squash-playing skills, and, very likely, some social benefits (affection, status and/or behavioural confirmation) as well because the activity is necessarily done with others. In general, doing activities together with others may involve certain extra ‘costs’ when compared with the equivalent solitary activity, while it will also, in almost every case, involve extra benefits.

In principle, SPF theory thus seems to combine several features that may help to make progress in the field of quality of life studies: it is a theory of goals and of purposeful action that can handle substitution effects, and enables to compare alternative (sets of) production factors in terms of efficiency. With regard to the study of how objective conditions affect quality of life, SPF theory may be helpful in identifying what human goals these conditions promote or hinder. It may also help, when studying the distribution of access to a particular resource, to identify what other resources or conditions, that can be substituted in the attainment of the same goal, should be paid attention to.

To make the level and distribution of external resources (objective conditions) interpretable in terms of their effect on individual subjective well-being, we need to know both the combinations of production factors available to the (category of) individual(s) and the relative efficiency of these production factors in the production of the universal and first order instrumental goals.

For a thorough understanding of SPF theory, the aims it was originally intended to serve, the mechanisms it supposes and the notions behind this, as well as for judging - later in this chapter - to what extent its applications thus far actually correspond with the original idea and whether they have yielded necessary elaborations and empirical support to it, it is useful to give some attention to the early development of the theory.

Lindenberg first presented the core elements of SPF theory in 1984 and in 1986, and added further explanation and detail to the basic form of the theory in an article with Frey (Lindenberg & Frey 1993) and in Lindenberg (1996). In Lindenberg (1984) some elements of what later became SPF theory were introduced in service of an argument concerning potential suboptimal outcomes in the allocation of social approval (i.e. social well-being). In this article we find the assumption of overall well-being being dependent on physical and social well-

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3 It should be noted, however, that for a reasonably accurate assessment of the cost-benefit ratio of a particular activity for a particular person, a large amount of detailed information would be needed. This would not be a problem in a so-called ‘individual 1’-type theory, but the purpose for which we need SPF theory, and its intended character of an ‘individual 2’-type theory, preclude such endeavours.
being, the latter again resulting from levels of status, behavioural confirmation and affection, as well as assumptions or ideas about the main ways in which these components of social well-being can be produced. Important in this article is also the notion that endowments with these components should be considered as part of a person’s ‘budget’, and that the production of social well-being can be modelled and analysed with similar methods as economists use for the production of marketable goods (i.e. using a constraint driven approach and including relative price effects). Lindenberg (ibid.) uses these notions in support of an argument that runs as follows: increasing affluence, Lindenberg claims, is accompanied by vanishing social structures, thus with vanishing of norms and social interaction that are needed for the realisation of affection and behavioural confirmation. This means that both people’s endowment with these goods decreases and the prices of these goods increase. As Lindenberg assumes that the supply of behavioural confirmation and affection is discontinuous, the actual demand of these will remain below potential demand, and consequently, people’s social well-being will increasingly depend on their level of status. As status is per definition a relative good, however, social well-being will necessarily be distributed more unevenly than in the past. Lindenberg then adds (somewhat speculative) that this will eventually hamper social engineering because low levels of social well-being would lower self-esteem and lead to impaired competence of people to react rationally to stimuli in choosing between behavioural alternatives.

Neither in the first (1984) nor in the second article (1986) in which Lindenberg introduced the main components of SPF theory, did he present them as an explicit theory: the presentation of these ideas was not the main purpose of these articles. In Lindenberg (1986) the main elements of SPF theory (the conceptualisation of the relation between goods and activities and well-being as a production function, and the specification of the two universal and six first order instrumental goals), were rather introduced to support the article’s main argument, the paradoxical effect of privatisation in consumption: people generally prefer not to be restricted in their consumption by being forced to share with others, yet the less consumption goods people are obliged to share, the less social well-being they get too. In order to make this argument, Lindenberg had to introduce a few important notions. In the first place the notion that the well-being or utility that people realise depends on what they have, what they do with it, and how they do this. In the second place, he had to introduce the notion of multi-functionality of certain forms of production, in this case for being able to argue that sharing arrangements do not only serve the consumption of the good concerned, but also - be it often unawares - the production and consumption of social well-being. In the third place, in order to demonstrate the relevance of the paradox he described, Lindenberg had to specify explicitly that both physical and social well-being are fundamental and universal human goals, and he had to specify the first order instrumental goals of social well-being as well, in order to define the universal goal by its contents.

It is not unimportant to note how SPF theory initially consisted only of a few auxiliary assumptions, necessary for the completion of an individual-level rational choice explanation. This auxiliary character appears to have been preserved also in later publications of SPF theory, to have guided its selective elaboration and to be important for the explanation of the origin and character of some problems that have arisen in some of the theory’s applications.

In the article with Frey (Lindenberg & Frey 1993, p.195-197), Lindenberg presents a more mature version of SPF theory. Again, the theory is not introduced as a focal theory which itself
directly explains an empirical phenomenon. It rather is introduced as an auxiliary theory that is
needed in consequence of the important role that the relative price effect has assumed in
sociological (rational choice) explanations. In recent decades, it has become increasingly clear
that the relative price effect from neo-classical economics is one of the most powerful and
robust regularities in the social sciences (ibid., p. 192). This effect simply holds that as one
good becomes more costly in comparison to other goods, individuals will purchase less of that
good. Lindenberg and Frey argue that the relative price effect also holds for non-market
goods, such as sociology often deals with, and that it is more adequate to assume that there are
identifiable conditions under which the size of the relative price effect will differ (such as
when choices concern the ‘moral dimension’) than that there are realms in which the relative
price effect would - for unspecified reasons - play no role at all (ibid., p. 193-193).
They proceed to argue that theorists should seek to specify the conditions that affect the size
of the relative price effect. From neo-classical economics, two such conditions are already
known, namely the character of the good (whether it is an inferior or a superior good) and the
price changes of other goods to which the good of interest stands in substitutional or
complementary relation. This second condition immediately raises a problem: how can we
decide which are the goods whose relative prices matter? As it is impossible to include all
goods in any theoretical or empirical analysis, the use of the relative price effect in explaining
or predicting behaviour thus requires insight into the relevant alternatives for the good under
consideration. At this point in the argument, the authors then propose SPF theory as a theory
of alternatives. They state that alternatives may come from hierarchical instrumental
connections, from active production, or from biases. SPF theory is a theory of alternatives
based on hierarchical instrumental connections.
In the subsequent exposition of SPF theory, Lindenberg explicitly points at the assumption of
Stigler and Becker (1977) of two kinds of preferences as its inspiration. Stigler and Becker
distinguished between

“universal preferences (goals) that are identical to all human beings and therefore need no
explanation, and instrumental preferences for the means that lead to the ultimate goals [...]”

Technically speaking, there is only one utility function for all mankind but there are
systematically different production functions for different kinds of people” (Lindenberg &
But because Stigler and Becker do not specify the universal preferences or goals, their
assumption still does not preclude ad hoc theorising, nor does it provide a clue about the
complementarity or substitutability relations between instrumental goals. That is the void
which SPF theory was primarily intended to fill, through the identification of the two general
goals (physical well-being and social approval, which are assumed to constitute Stigler &
Becker's universal preferences) and five first order instrumental goals (comfort, stimulation,
status, behavioural confirmation and affection).
SPF theory does not identify instrumental goals at levels below that of the five first order
instrumental goals. Lindenberg states that

“Still lower level goals are entirely dependent on the opportunities and restrictions an
individual faces [...] The heuristics for identifying goals is thus driven by a guided search

4 Lindenberg (1986) and Lindenberg & Frey (1993) still named the third first order instrumental goal for social
well-being ‘affect’, while later the term ‘affection’ was used. The latter term corresponds better with the content
of the concept than ‘affect’, which is usually meant to refer to something different. In the remainder of this book,
I will use the term ‘affection’ for the third first order goal for social approval in SPF theory.
for systematic production possibilities for social approval (in its three forms) and physical well-being (in its two forms). Substitutes and complements will show up as by-products of the construction of nested social production functions. Seen in this light, it is quite clear that the virtual set of alternatives is not defined by a utility function imputed by the researcher but rather by production possibilities for physical well-being and social approval. Changes in relative prices concerning these possibilities are vital for the explanation of behaviour. And although we have still no general theory for these possibilities, we have an explicit search heuristics for discovering them which greatly reduces the ad hoc theorising on what are relevant changes in relative prices.” (ibid., p. 196, 197; my italics).

The closing sentence of this quote is particularly telling, as it reveals the still auxiliary character Lindenberg and Frey attribute to SPF theory. Actually, they pose that it is rather a helpful heuristics for finding out what are the salient behavioural alternatives and relevant restrictions for rational individuals in a particular situation, than that it is a full-fledged theory that directly tells, for any particular behavioural situation, what are the salient situational goals, opportunities and required resources. It should be noted that initially Lindenberg (1984) used the elements of SPF theory as an analytical model, while here he emphasises that SPF theory is a heuristic tool to identify situationally determined instrumental goals and preferences. Using SPF theory in both functions need not be problematic: using it as an analytical model does not preclude it being a useful heuristics too. Especially the substitutability between lower order goals in SPF theory invites to use it in both functions. The heuristic character of SPF theory makes it ideal for application to problems concerning the rational choice explanation of behaviour in specific well-defined situations. In several studies, SPF theory was used and found quite helpful in this way (see also section 3.3.). Thus far, the conceptualisation of the theory’s main elements has thus far been geared to its use as a heuristic tool. However, when we want to apply SPF theory to problems that at a more general level address the question of what constitutes quality of life, we need the theory in its analytical function rather than as a heuristics (see section 3.5.). Therefore, the conceptualisation of the theory’s main elements needs to be improved upon, to facilitate the use of SPF theory as an analytical model.

Gradually, as the number of applications of SPF theory increased and more researchers started to work with it, several suggestions as to how the basic model might be extended and elaborated have surfaced. Overall, these suggestions are largely consonant with regard to what would be the major points for further elaboration. The main points that are raised concern the desirability of integrating into SPF theory the time perspective (covering investment behaviour, the effects of anticipated life events (cf. Sanders 1991) on present production functions and patterned changes of social production functions over the life course), framing effects (including the effects of a loss-frame on one’s production functions) and so-called metagoals, that refer to the quality of production functions (which at any rate includes the vulnerability of these). In Lindenberg (1996) these desired additions to the theory’s basic model are expounded at some length. In sections 3.4. and 3.5., the metagoals receive further discussion.

### 3.3. Previous applications of Social Production Function theory

Over the past decade, there have been a number of authors that have taken up Lindenberg’s
SPF theory and applied it to research problems that bear on questions of the quality of life (e.g. Nieboer 1997; Steverink 1996; Ormel et al. 1996; Van Eijk 1997). In general, these authors have used SPF theory as a tool for building their explanatory models, rather than testing the core assumptions of SPF theory proper.

In this section, the studies of Nieboer, Steverink and Van Eijk are discussed. The publications of Ormel and colleagues, who were connected to the overarching research program to which these three studies belong, are largely based upon empirical evidence of these and require no separate discussion here. I will discuss the substantive research problems to which SPF theory was applied but superficially and give attention mainly to the operationalisations of the theoretical concepts, to empirical evidence concerning the tenability of SPF theory’s assumptions proper, and to suggestions made by these ‘early users’ of the theory for its further elaboration and refinement.

Steverink (1996) has applied SPF theory in a study that aimed to explain differences among physically vulnerable elderly people in their preferences regarding the transition to protected care environments (rest homes). She approached the preferences regarding the use of care arrangements as resulting from the confrontation of people’s basic or universal goals with their varying restrictions. According to a rational choice approach, this confrontation of people’s basic goals with the alternative opportunities they have for realising them, will lead each individual to choose that course of action that, given their resources and restrictions, will best serve the realisation of the universal goals.

Steverink not only adopted this general idea that is central to SPF theory, she also followed SPF theory’s hierarchy of goals in her specification of the universal goals people strive for. She distinguished physical and social well-being as well as the five first-order instrumental goals in her theoretical explanation. According to Steverink, orientation towards institutionalisation can be explained through (a) the level of the five first-order goals an elderly person is able to realise and expects to realise in the near future and (b) the subsequent strength of the ‘loss avoidance’ motive. She argues that over the life course, and especially towards the later part of life, people gradually lose resources and face increasing restrictions for the production of well-being. Initially, the loss of resources can be accommodated more or less through substitution mechanisms: when a person loses the means to produce status or behavioural confirmation, he will increase his efforts to maintain or even increase his level of affection, and the same is expected to hold for stimulation respectively comfort. It is hypothesised that there is a systematic order in the subsequent loss of resources, namely that ageing people first face a decline in production capacity for stimulation, status and behavioural confirmation, while the production capacity for comfort and affection will be corroded only later. Steverink then introduces the concept of a ‘critical stage’ that occurs when a person has lost the means to realise stimulation, status and behavioural confirmation, he will increase his efforts to maintain or even increase his level of affection, and the same is expected to hold for stimulation respectively comfort. In this critical stage, the loss avoidance motive becomes predominant. It is assumed to react more strongly to threats concerning affection than to threats to comfort. Steverink hypothesises that it is the

5 Lindenberg (1996, p. 182 note 1) also mentions several other studies, less directly concerned with quality of life issues, in which SPF theory has been applied (Van Liere 1990; Maas 1990; Sanders 1991; Westert 1991; Wielers 1991; Van der Lippe 1993). However, these authors used selected elements from SPF theory, while in my view the separate elements are not (exclusive to) SPF theory: it is the combination of elements and their interrelations that makes SPF theory a distinct theory.
experienced level of each of the five first order goals and the predominance of the loss avoidance motive that explain the elderly’s preferences regarding hospitalisation in a rest home, in combination with a number of external variables such as the availability of rest home places, the familiarity with the rest home and social pressure from others.

The operationalisation of the five first-order instrumental goals in Steverink’s study is in my opinion problematic. Stimulation she measured by the number of stimulation-yielding activities the elderly person engages in at a daily or weekly basis. The distinction between stimulation-yielding and other activities, however, was made on the basis of unexplicated arguments and not based on any empirical evidence. Equally problematic as the categorisation of activities is the fact that it ignores the notion that it depends on the whole of a person’s production functions what will be the yield of a particular activity. A third objection to Steverink’s operationalisation of stimulation is that it is the amount of production factors for stimulation that a person uses rather than the resulting level of stimulation that is measured.

Comfort was operationalised as the inverse of the need for assistance with self-care and daily housekeeping activities, measured by the 18 item Groningen Activities Restriction Scale (GARS, cf. Kempen et al., 1993). Given the study's focus on frail elderly people, and the argument that the extent to which people need assistance depends on their physical limitations, illness or pain, it is understandable that people’s ability to perform ‘basic’ activities independently is considered to be an indicator of comfort. However, it should not be considered a perfect indicator, for not only is it well possible that a person's need for assistance is adequately met and thus no decrease in comfort need to occur, but there may also be a need for assistance that is not due to physical discomforts and, moreover, the indicator only pertains to low levels of comfort. For the research problem Steverink dealt with, the latter objection may be less severe than in other cases, but still this indicator restricts the possibilities to consider substitution effects (when a person would have a high level of well-being and use that - to some extent - as a compensation for deficits in the other goals. By using a more direct measure of the level of comfort of her respondents, most or all of these objections might have been avoided.

Status was operationalised as the respondent’s former occupational prestige (for married women and widows, the husband's former occupational prestige was used). A possible objection to this well-defendable operationalisation is that it overlooks all other sources of status that may be relevant, such as marital status, educational attainment, wealth, number of children, physical capacities, youthful appearance, et cetera. This drawback of Steverink’s operationalisation of status is - again - related to the fact that she does not operationalise the level of (subjectively experienced) status, but rather tries to approximate this via the resources people may use to obtain status.

Behavioural confirmation was operationalised in a way similar to stimulation: on the basis of the number of activities that were a priori categorised as ‘yielding behavioural confirmation’ in which the respondents were involved at a daily or weekly basis. Here the same objections hold as for stimulation.

Affection, finally, was operationalised as the score on the Loneliness-scale of De Jong-Gierveld & Kamphuis (1985). Although this scale is more sensitive at low levels of affection, I think this operationalisation well chosen.

In the empirical part of her study, Steverink did not really test SPF theory as such, but rather the hypotheses concerning the effect some elements on the elderly’s orientation towards...
giving up independence. As to the latter, she found significant effects of comfort and affection, a finding that lends support to the assertion that physical capacities and perceived social isolation matter for people and affect their motivation to change their ways. Further, Steverink found comfort and stimulation, as well as behavioural confirmation and affection, to be positively related. It is unclear to what extent these findings support the basic model of SPF theory, however, because these findings may be partly artefacts of the operationalisations, while I also doubt whether such positive relations are indeed what the basic model of SPF theory predicts.

Overall, in Steverink’s study SPF theory proved to be a useful though not sufficient tool for explaining preferences. SPF theory also proved a useful heuristic tool in her study for identifying problems of substitution. Steverink’s study does not lead to specific suggestions for the further conceptualisation of SPF theory or for the measurement of its main concepts.

A second study in which SPF theory played a central part, is Van Eijk’s (1997) dissertation research on the activity patterns of elderly people and the effects thereof on their subjective well-being. Van Eijk’s study was instigated by the fact that since the 1980’s western European countries have increasingly adopted policies that aim to activate elderly people; policies that are based on the belief that active participation in diverse social activities would positively affect the mental and physical well-being of elderly people. Van Eijk argues that despite this strong emphasis on activation policies, empirical knowledge of the actual time use patterns of elderly people is still insufficient and the hypothesised effect of activities on well-being still needs to be tested. She investigated the time use patterns of almost 5000 persons over 57 years of age and describes how both the participation in and the subjective experience of activities differ according to age, gender, marital status, physical ability, income and occupational prestige. She then proceeds to investigate the relation of activity patterns to well-being, using two sets of hypotheses, one derived from a ‘lay approach’ and one derived from SPF theory. From the lay approach Van Eijk derived two hypotheses, holding that the level of subjective well-being will be higher the more time is spent on valued activities, and the larger the proportion of time that is spent on valued activities. From SPF theory she derived the following hypotheses: firstly, that regardless of general activity levels, the higher the sum of levels of the five first-order goals, the higher the level of subjective well-being (reflecting the theory’s basic premise that the first-order goals are at a higher level in the instrumental hierarchy than activities); secondly, that the association between activity and well-being is strongest for persons with a moderate level of resources, that it is weaker when all relevant resources are lacking and that it is weakest when all relevant resources are available (reflecting the notion of substitution activity for endowments and of the activity’s outcome being dependent on certain resources). In testing these hypotheses, the study of Van Eijk constitutes also a test of some of SPF theory’s basic premises.

Her operationalisations of the first-order instrumental goal avoids most of the problems of Steverink’s operationalisations. Comfort was operationalised by two five-category items, one tapping self-rated health and the other self-rated independency with regard to daily obligatory activities. This seems still to be a crude measure for physical comfort, because it may be more sensitive at lower levels of comfort than at higher levels and because health may not perfectly coincide with ‘feeling comfortable’, but it certainly covers a larger part of the concept of

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6 Steverink needed to add the notion of people’s anticipations and of the ‘critical stage’. 
comfort than mere independency does. Moreover, in using a self-rating of health, this operationalisation comes closer to a measure of the level of comfort than an operationalisation that concentrates on the means for reaching comfort.

Stimulation was operationalised with one four-category item, asking the respondents how often they have felt bored in the past four weeks. Although it may be objected that here again the measure is particularly geared to the lower range of stimulation levels and that the concept of stimulation is probably broader than this operationalisation reflects, it has the advantage that it refers directly to the level of stimulation (instead of to means for stimulation, as does Steverink’s operationalisation).

Affection was operationalised with two five-category items, one asking the respondents to what extent they feel to have close relationships that provide them with a sense of emotional security and well-being and one asking respondents whether they feel that there are enough people that they feel close to. Here again, the strong point of these operationalisations is that they rather well tap the experienced level of affection. It should be noted that the second item allows that also ‘caring about others’ may contribute to one’s level of affection, a notion that is at odds with Lindenberg’s original (1984) definition of the concept (see 3.4.2.).

Behavioural confirmation was operationalised with one five-category item, asking respondents to what extent they feel to have relationships in which their competence and skills are recognised. This operationalisation seems preferable to that of Steverink, because it comes closer to measuring the actual level of experienced behavioural confirmation, but still I think it could be improved upon. For one thing, using this item one will only tap behavioural confirmation that is realised in enduring relationships, while it is probable that people may also realise behavioural confirmation in more transient contacts. Further, although recognition of competence and skills is probably a large part of behavioural confirmation, the first-order goal may be broader and also include the approval one gets for adhering to shared norms, and e.g. for sociable behaviour. Due to external restrictions upon the data collection, Van Eijk could not add an operationalisation of status.

Now what about the empirical support for the basic assumptions of the SPF theory from Van Eijk’s study? Concerning the first hypothesis, Van Eijk’s data suggest that the effect of activity on subjective well-being is indeed largely through the first-order instrumental goals. In the regression of SWB on activity and the sumscore of first-order goals, the effect of activity dropped considerably when the sumscore of first-order goals was entered. It did not completely disappear, however, but given imperfections in operationalisation and measurement, these results may safely be regarded to support SPF theory’s premise concerning the position of the first-order goals in the instrumental hierarchy.

With regard to the second hypothesis, the curvilinear association between availability of resources and the strength of the activity effect on well-being, this was tested both for the number of resources from a predetermined set that were available (in whatever quantity) and for the amount in which each of the considered resources was available. On the basis of Van Eijk’s empirical evidence, the hypothesis of a curvilinear relation could not be accepted. It was found, however, that the effect of activity on subjective well-being is strongest when no or very little resources are available. The availability of some separate resources, in particular physical functioning, was found to affect the strength of the relation between activity and well-being significantly (for more detail see Van Eijk 1997, p. 145-158). Overall, the study of Van Eijk does offer support for those elements of SPF theory that are reflected in her hypotheses. The heuristic use of SPF theory again shows successful, here in concentrating on efficient means – which may not involve activities - for reaching higher order goals.
As to the further elaboration of SPF theory and corresponding empirical research, Van Eijk (ibid., p. 175-178) suggests that efforts should be made to investigate the substitutability of different (types of) activities. She argues that activities (and why would not the same hold for resources?) can most likely be ordered according to which first-order goals they contribute to, and that it is this ordering that will determine the substitutability of activities. A second suggestion for the further elaboration of SPF theory is to further specify the role of ‘characteristics of the environment’ (i.e. of objective conditions) in the relation between activity and well-being.

The third and last study discussed here because of the central role played in it by SPF theory, is that of Nieboer (1997). Nieboer performed a prospective study on changes in well-being of elderly people due to serious illness or loss of their partner. She used SPF theory as the main building block for her explanatory model, which however also includes the role of the loss frame for relating life events (illness or loss of the partner) to changes in the level of well-being of the elderly person. Nieboer used the framework of SPF theory to characterise the elderly persons’ production functions: the multi-functionality of activities, the production capacity, the available resources and the dependency of the social production functions of the respondent on his spouse. In Nieboer’s hypotheses, these characteristics of the elderly’s social production functions, together with the intensity of the loss-frame, formed the main predictors for the changes in well-being after the life events under study. The life events under study were interpreted in terms of the disturbances they entailed in the pre-event production functions of the respondents; the two main types of disturbances being changes in care tasks (i.e. changing restriction with regard to other activities) and loss of access to activities that the partners used to do together).

In Nieboer’s study, the levels of the first-order instrumental goals were not used as variables, thus they were not operationalised. She did categorise activities according to the first-order instrumental goals they supposedly contribute to, but it is not necessary to describe the method she used for this here (for more detail see Nieboer 1997, p. 59-61).

Concerning the extent to which the study of Nieboer provided empirical support for elements of SPF theory proper, the author states that “many of the findings are consistent with the social production function theory. [...] This theory appeared to be well-equipped to address interdependencies between family members, the effects these interdependencies have on the objective meaning of the event and, consequently, on changes in well-being” (ibid., p. 181).

The study thus offered support for the plausibility of the ideas of SPF theory and for the usefulness of a production function perspective for studying (changes in) people’s capacity to attain subjective well-being. The study does not, however, offer any strict tests of the tenability of the relations between concepts that SPF theory posits. It also does not give suggestions for improving the conceptualisation and measurement of the core concepts.

It must be noted that Van Eijk and Nieboer applied SPF theory in much the same way as is the objective of this study, namely as a theory predicting well-being from resources and activities rather than as a heuristic that works the other way round (from the notion that people strife for well-being to the identification of relevant resources and instrumental goals). The apparent ease with which the theory lent itself to that task and the empirical support for the theory that was found in doing so, seem to encourage the undertaking in this dissertation.

It should also be noted that the studies of Steverink, Van Eijk and Nieboer all dealt with
research problems restricted to elderly people. It is therefore uncertain whether the empirical
evidence concerning the tenability of the basic premises of SPF theory can be generalised to
the whole (Dutch, adult) population. The tenability of these basic premises might not only
differ for age but also for cohorts. Also, when broadening the scope of research from the
elderly to include more age groups, it may be that some of the operationalisations of the first-
order goals that were found sufficiently satisfactory in the cited studies will not be satisfactory
for a more diverse population.
A last remark should be that, until now, there has not been any empirical investigation of the
actual production functions (i.e. the combinations of resources and activities) employed by
diverse categories of people, nor of what are the most relevant concrete production factors for
the different first-order goals7. Thus, SPF theory still lacks detailed knowledge about sets of
specific behaviour that lead to higher level goals.

3.4. The conceptualisation of the universal and the first order goals: openness and
opportunities

One problem of SPF theory is the definition and conceptualisation of the first order goals and
the universal goals. Although at a first glance most people will find no trouble in imagining
what social and physical well-being encompass nor what status, comfort, affection,
stimulation and even behavioural confirmation refer to, these concepts are at least unclear
when looking more closely.

As to the two universal goals, these are merely defined by the first-order goals that serve their
realisation. This shifts the task of specifying the definition to the lower level in the
instrumental hierarchy. Besides the fact that this is, from a theory formation-perspective, not
very elegant, it also poses a problem when trying to infer the relation of the two universal
goals with overall well-being and when trying to infer the exact meaning of ‘overall well-
being’ in the conceptual framework of SPF theory. In 3.4.1., I will explain the problems
related to the two universal goals in SPF theory.

As to the five first order instrumental goals, these are not completely clearly defined either.
When looking closely at the definitions used by Lindenberg (1984, 1986, 1993, 1996) and in
the three main applications of SPF theory that were discussed in the previous section
(Steverink 1996; Nieboer 1997; Van Eijk 1997), we find differences that should not too easily
be disregarded. Moreover, even where the different definitions of the first order goals
approximately agree, we find that at least some of the first-order goals are merely defined by
the means that generally lead to their realisation. Such definitions, of the type “goal G is what
you get from having resource R or from doing activity A”, are problematic for more than one
reason. In section 3.4.2. I will elaborate on the definitional problems concerning SPF theory’s
first-order goals, and argue for the importance of achieving a more precise conceptualisation
and, subsequently, less ambiguous definition of these concepts.

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7 As an exception Tinsley & Kass (1978, 1979) must be mentioned, who investigated the fulfilment of
psychological needs through leisure activities. If we see through terminology, the psychological needs that
Tinsley & Kass distinguish can well be conceived of as instrumental goals coupled to SPF theory’s first order
instrumental goals. However, their work is restricted to leisure activities, which form only a small subset of the
activities that are relevant in our perspective.
3.4.1. **The Conceptualisation and Definition of Social and Physical Well-being**

In quality of life studies and subjective well-being research, it is common usage to distinguish *life domains* or *domains of well-being*. The common opinion is that overall well-being or ‘satisfaction with life as a whole’ may be disentangled into people’s enjoyment of or satisfaction with the different domains that together constitute their life. Although there is no complete consensus about the causality between satisfactions with or well-being in these different life domains and overall well-being, it seems most probable that there are causal effects in both ways.

Beginning with the study of Andrews and Withey (1976, cf. Chapter 2 of this book), different distinctions of life domains have been suggested. At present, seven domains are relatively broadly accepted: *material well-being; health; productivity; intimacy; safety; community connection and emotional well-being* (Cummins 1997a,b). In addition, at least three other domains are frequently distinguished: *self-esteem; religious or spiritual well-being; and psychological health* (e.g. Emmons 1999, 1992).

If we want to use SPF theory as a general theory for quality of life studies, explaining how (differences in) well-being come about, these generally accepted ideas about what life domains are the main constituent parts of *overall well-being or satisfaction with life as whole* form the setting in which SPF theory should define and legitimate its central concepts. In that case, the simple ‘definition’ of the two universal goals in terms of the respective first-order instrumental goals that lead to their realisation no longer suffices. We should make clear that and how the concepts of SPF theory cover the elements in the field of quality of life studies: it is up to the ‘newcomer’ to explain how it relates to other conceptual frameworks in the field. Therefore it is necessary to trace how the two universal goals in SPF theory relate to the ten commonly accepted life domains, and, consequently, to explicate whether the concept of ‘overall well-being’ in SPF theory is equal to the common notion of overall well-being, or whether it is restricted to the composite of only a subset of the ten commonly recognised domains of well-being.

Of course, it depends on the exact definition and conceptualisation of *physical well-being and social approval or social well-being*, to what extent different domains of well-being are represented therein. Above we already saw, however, that the two universal goals are not defined very exactly.

Given the basic model of SPF theory, with its hierarchy of goals that suggests (even though it does not explicitly claim) that physical and social well-being are the only two components of overall well-being, it seems wise to use a rather broad preliminary conceptualisation of the two universal goals, in order that together they cover as much as possible all ten domains of well-being and that the ‘overall well-being’ of SPF theory deviates minimally from the way ‘overall well-being’ is conventionally used.

Using a broad interpretation of the two universal goals, it appears that all of the seven life domains that are broadly accepted in quality of life studies (Cummins 1997a) as well as self-esteem, are all in some way or another represented in the concept of overall well-being in SPF theory. Most of these domains are considered intermediate goals in SPF theory, meaning that

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8 The question whether the different life domains affect people’s overall assessment of the quality of their life or rather the other way around; this discussion is usually referred to as the bottom-up or top-down debate, cf. Scherpenzeel & Saris 1996.
they can be seen as contributing to either social or physical well-being or both. Material well-being and health are intermediate goals in the production of comfort and stimulation, but also of status. With regard to material wealth, it is clear that money or assets such as a house, a car, or a boat can contribute to one’s subjective well-being. According to SPF-theory there are two ways in which material wealth contributes to well-being. Firstly, wealth enhances status. Having a nice house or high income helps to distinguish oneself from others. These so-called endowments do not require any action other than the awareness that you have something that others don’t have. The main way in which wealth enhances well-being, however, seems to be that it is one of the requisites for having access to many activities (such as vacation trips or visiting a restaurant, and in fact to almost every activity that costs money or requires assets), which can contribute to any of the five first-order instrumental goals. Money is thus an important second-order resource for activities that pertain to all higher order instrumental goals.

Being healthy is an important endowment for people’s level of comfort and it is a second-order resource for the performance of other life-activities. Still, there are many other factors which influence the extent to which an illness or impairment results in a loss of comfort or a loss of activities. Therefore, one’s health can be seen as an endowment or resource that influences the ability to satisfy higher level needs, but it should not be treated in the same manner as for example our level of affection or behavioural confirmation.

Productivity is an intermediate goal for the production of - in particular - stimulation, status and behavioural confirmation. Paid work and other productive activities are in SPF theory considered as first-order resources for multiple first-order goals. In SPF theory, almost any activity can be ‘productive’, however. For the productivity domain, it will be mainly important to what extent activities are multi functional (i.e. contribute to the realisation of more than one first-order instrumental goal) and to what extent they combine investment in future productive capacity with immediate production of social and physical well-being.

Intimacy and community connection lie close to the first-order goals of affection and behavioural confirmation respectively (at least, close to the preliminary conceptualisation of these first-order goals I give below). Social or family connections are clearly prerequisites for the production of social well-being: it is not possible to fulfil one’s social needs without significant others. However, different types of ties are necessary to reach the different first-order goals. For example, affection is most easily produced through intimate or ‘attachment’ ties, whereas status is easier attainable in work relations. The intimacy domain is represented in the theoretical framework of SPF theory at several places: part of it lies at the level of endowments (e.g., close friends contribute to intimacy also between actual interactions), part at the level of instrumental goals (you strive for intimacy with friends and partner, because this increases the amount of affection you may get from them) and part at the level of second-order resources (e.g., many activities are more enjoyable if they are shared with a person with whom one has an intimate relation). And, of course, the contribution of the intimacy domain to overall well-being is similar to what in the SPF framework is called the level of affection that is realised.

With regard to the domain of community connection, it has been argued that this domain reflects people’s need to be useful to society (Van Nieuwenhuizen 1998). It could also be translated in terms of the desire to experience a sense of belonging (De Vos 1998; Baumeister 2000).

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9 Empirical evidence from advanced countries has shown, however, that beyond the poverty level, wealth and income have in general a negligible effect on subjective well-being (e.g. Lane 2000; Veenhoven & Timmermans 1998; Van Bruggen 2000).
In the conceptual framework of SPF theory, community connection or belongingness seems to be equivalent to the fulfilment of the social goals and therefore similar to what we think of when we speak of social well-being. In particular it appears to pertain to the level of affection and behavioural confirmation. Community connection or belongingness is of course also a resource in the social production functions: if one would not participate in groups, the social goals could not be realised, least of all behavioural confirmation (which can only be produced when a person considers himself as a member of a group where certain behavioural norms are shared).

Safety cannot be found as a separate goal in the SPF-model. It is argued that the safety need really reflects the human tendency to avoid losses. People respond more strongly to losses than to gains (see Lindenberg 1996; Tversky & Kahneman 1991; Nieboer 1997) and a threat to their means of production is likely to provoke anxiety. In terms of SPF-theory, the need to feel safe is in fact the need to protect one’s production functions and secure one’s means of production (see also Lindenberg 1996, p. 180-181). Safety is therefore not a similar kind of goal as comfort and affection and the like, but it could be incorporated in the theoretical framework of SPF theory as a metagoal (cf. section 3.5.2, and Chapter 7).

Emotional well-being seems to encompass both an agreeable level of stimulation and affection, and possibly also agreeable levels of the other three first-order goals contribute to emotional well-being. The concept of emotional well-being as a domain in overall well-being is, however, not very clear and rather problematic. Although there is broad consensus in quality of life research that overall subjective well-being consists of two components, life satisfaction and affective state or hedonic level, it is still difficult to disentangle these two components. Anyway it does not seem suitable then to model people’s emotional well-being as one of domains in which their overall well-being comes about, as, in an instrumental hierarchy, it would logically be at a higher level than e.g. the domains of productivity or intimacy. If there is no clear definition that shows how ‘emotional well-being’ differs from affective state, it does not seem logical to ascribe it a different place in the theoretical framework than is ascribed to life satisfaction; thus, emotional well-being seems more aptly conceived of as an aspect of overall subjective well-being. Lacking clear definitions of the domains of emotional well-being and psychological health, it is not clear either to what extent the two overlap. Therefore, the remarks made below about the relation of psychological well-being to SPF theory may also partly apply to emotional well-being.

Self esteem, finally, appears in SPF theory’s hierarchy of goals both at the bottom, as an endowment, and at the top, as an element of status, behavioural confirmation and affection. In SPF theory, all three first-order goals for social well-being have a self-evaluating component (e.g. Lindenberg 1996). One’s levels of affection, status and behavioural confirmation are assumed to have a self-evaluating component that results from previous approval from others and mediate present approval from others into subjectively experienced social well-being. Self esteem, as a domain of overall subjective well-being, may thus be considered incorporated in the instrumental hierarchy of SPF theory.

For eight of the ten domains that are commonly distinguished in subjective well-being research we have now seen that they are or can be covered by the elements of the hierarchy of goals in SPF theory, at least to a large degree. Tracing the positions these domains hold in the SPF hierarchy of goals actually clarifies in what ways they contribute to overall well-being. However, the two remaining domains, of religious well-being and psychological health, are less easy to relate to the theoretical framework of SPF theory.
In a strict interpretation of SPF theory, contributions to overall well-being can only go through social and physical well-being, as there are no other ‘paths’ to the highest level in the hierarchy. Logically, this may mean either one of two things: (1) indeed all contributions to overall well-being go through social or physical well-being, and there is nothing that does contribute to overall well-being that can not be identified as one of these two universal goals; or (2) there may be other things that do affect overall well-being which do not go through social or physical well-being, and SPF theory does not provide predictions about these, therefore there is a part of overall well-being that falls outside the scope of SPF theory, thus the concept of overall well-being as it is used in SPF theory is somewhat smaller than the concept of overall well-being as it is commonly used in quality of life research.

Whether (1) or (2) is the case is a problem that can only be empirically solved if we have valid measures for all domains. Despite all the data that are collected to assess whether different domains have ‘unique’ contributions to overall well-being, ‘uniqueness’ of such contributions depends of course on how the other domains are defined and operationalised. Thus far there have, as far as I know, been no empirical investigations in which social and physical well-being, in the sense SPF theory uses these, are used as the main domains, so present data can not solve the problem. Presently, a measurement instrument for the concepts at the highest levels of the SPF-hierarchy has yet to be developed. But even if such an instrument were ready at hand, it would still depend on the underlying conceptualisations whether there will be domains left that do contribute to overall well-being independently after controlling for social and physical well-being. This problem thus amounts to a choice between two assumptions. The assumption reflected in (1) would allow the broadest scope for SPF theory. The assumption reflected in (2) suits a more cautious and modest approach, where the claims of researchers in the domains that may possibly fall outside the scope of SPF theory are not challenged, and where the question of how much there is outside of social and physical well-being that contributes to overall well-being is left open for empirical evidence. SPF theory proper does not give explicit direction as to which assumption should be chosen. On the one hand, it can be argued that we should use the broadest scope in which psychological health and religiosity are not excluded, but rather incorporated in the model. Mental health can be seen as a stable personal resource which typically does not change much during mid-life, that is, between the ages of 25 and 60 (see Ormel & Schaufeli 1991; Nieboer 1997), but it may also be seen as a result of solid production functions. Psychiatric illnesses may be treated in the same manner as physical impairments. Even though the symptoms are different, this does not necessarily imply that we need a different model of men for psychiatric patients. With regard to religiosity, it can be argued that the need for a consistent value-system is incorporated in SPF-theory, because the concept of behavioural confirmation explicitly focuses on the presence of internal and external norms as opportunities to obtain well-being. If it is the presence of a relationship with God (or some other supernatural entity) that seems problematic, we may argue that there are plenty of examples of one-sided relationships (e.g., movie-stars, politicians) that are instrumental for people to obtain well-being.

On the other hand, one may argue that the second assumption is more realistic. There may be other things that affect overall well-being which do not go through social or physical well-being; SPF theory does not provide predictions about these, therefore there is a part of overall well-being that falls outside the scope of SPF theory. As a higher level goal, psychological well-being may partly fall outside of what people can produce themselves, and therefore partly outside the definition of overall well-being as highest goal in the SPF hierarchy of goals. This
is not to say that psychological health is not a highly important element of overall well-being in the broad sense, but rather that it may largely be exogenous to people’s social production functions, and that it may also contribute to overall well-being directly, instead of only through social well-being and physical well-being. It can be argued that SPF-theory presupposes a minimum level of psychological health, because the basic assumptions that people strive for physical and social well-being can not be expected to hold for people with serious psychopathology.

For the domain of religious well-being it is also doubtful whether its contribution to overall well-being goes completely ‘through’ social and physical well-being. Surely, the benefits of religious behaviour may affect overall well-being partly through social well-being and possibly also through physical well-being. Religion may provide an individual with additional groups in which he can participate and to which he may feel to belong, and within these groups it is likely that beliefs, values and norms are to a large extent similar, which facilitates the production of behavioural confirmation through norm-conforming behaviour. Religion may also contribute to the consistency of one’s own norms, as well as the consistency between these and the norms of others. Higher consistency implies higher yields from norm-conforming behaviour, and thus higher efficiency of the production functions. Especially the latter might account for much of the positive influences on well-being and life satisfaction that people may attribute to their religious beliefs. However, all this does not preclude that there is also a unique contribution of religion to overall subjective well-being that does not go through social well-being or physical well-being. It may thus be wise to allow for the possibility that some elements of overall well-being fall outside the scope of SPF theory, and that religious well-being could be one of these.

A second argument for leaving religious well-being outside the scope of SPF theory is that this theory is designed to deal with the hierarchical ordering of preferences and instrumental goals in relation to universal human goals. It can be well defended that physical and social well-being would be universal goals. But religious well-being is obviously not a universal goal: many people do not strive for religious well-being, and can not even imagine valuing it. Religious well-being is thus possibly an additional and independent component of overall well-being, the weight of which may vary strongly over people and be equal to zero for some. If we consider this to be the case, religious well-being would lie outside the overall well-being concept in SPF theory. All religion-related activities and resources that people do use in their social production functions, are then in this theory only investigated with regard to their role in producing social and physical well-being. Whatever other benefits people may derive from religion circumventing the five first-order goals for social and physical well-being, is left open. Also left open is the relative weight of this ‘SPF-external’ religious well-being as compared to the weight of the social and physical components in an all encompassing ‘overall well-being’; we may only assume that this relative weight varies over people.

In this dilemma of whether SPF theory would best assume that there are no other ‘paths’ to overall well-being than through the two universal and five first-order goals or that there may be other elements to overall well-being that fall outside the scope of the theory, I personally prefer the latter assumption. However, the above should have made clear that there are also

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10 The argument can even be reversed: apparently the idea that every individual does and should strive to optimise social and physical well-being is so universally accepted (and even internalised as a norm), that, if a person does not strive to produce these two goals, this is, in our society, considered to be psychopathological.
grounds for holding the reverse preference; in any case, I have not found conclusive arguments for either option.

So, where does this leave us regarding the conceptualisation of the upper two levels in SPF theory’s hierarchy of goals? How should we understand the concept overall well-being as this is used in SPF theory? And how broad should we define the universal goals social and physical well-being? Should we stretch their definition so that all aspects of well-being, including religious well-being and psychological health are duly covered? Or should we rather strive to keep these two universal goals 'pure', which we may only do at the cost of abandoning the pretension that ours is a complete model of how overall subjective well-being comes about?

I find myself unable to make these decisions, for want of knowledge of the phenomenology of subjective well-being. Of course we might take a decision based on some 'gut-feelings', but the robustness of our theory would benefit more from grounding these decisions on empirical evidence of how these concepts and their interrelations look like in people’s experience. If possible, this should be explored in order to be able to come to a more precise definition, for SPF theory, of overall-, physical-, and social well-being and the relations between these. We may then regard the present under-specification of these elements as an opportunity to improve the agreement of the theoretical framework of SPF theory with both current insights in subjective well-being studies and with phenomenological evidence.

3.4.2. The conceptualisation and definition of the first-order goals in SPF theory

It is not only the concepts at the top two levels of the hierarchy of goals that, at a closer look, appear more problematic than at first sight. This also holds for the first order instrumental goals, in particular for affection and behavioural confirmation. The difficulties concerning the first-order instrumental goals partly follow from the unsolved dilemma concerning the universal goals discussed above (this part of the difficulties are below referred to as problems of conceptualisation), but also apart from these, there is some ground for dissatisfaction about the definitions. Let’s start with the problems of definition.

The definitions or descriptions used for the first-order instrumental goals are not always the same in the different publications on SPF theory. In Lindenberg (1984) we find the three first order goals for social approval defined as follows:


It is doubtful whether, thus defined, the three first-order goals for social approval would
indeed cover all forms of social well-being (cf. section 3.4.1.). For example, the above definition of affection only includes a one-way affection, namely the thing you get when someone else cares for you. It does not include the possible contribution to well-being that is realised by incorporating the well-being of someone else in your own utility function, even though I believe many people would agree that caring for others can contribute to subjective well-being in an important way.

In Lindenberg & Frey (1993) the definitions of the three first order instrumental goals for social approval are largely similar:

“Status refers to a relative ranking (mainly based on control over scarce resources); behavioural confirmation is the feeling of having done ‘the right thing’ in the eyes of relevant others (including yourself). Affect11 is what Ego get from Alter if Ego and Alter are involved in an affective relationship. A central ingredient in such a relationship is that Ego and Alter care for each other. ‘Caring for somebody’ here means that indicators of Ego’s utility have become goods which produce a certain amount of physical well-being in Alter and vice versa” (Lindenberg & Frey 1993, p. 196).

No definition is given in these articles of the two first-order instrumental goals for physical well-being, comfort and stimulation, they are merely mentioned. In Lindenberg (1996) the first-order instrumental goals are not explicitly defined. However, Lindenberg here equates comfort with Maslow’s ‘physiological needs’, affection with Maslow’s ‘belongingness’ and ‘love needs’, and suggests that Maslow’s ‘esteem needs’ cover both behavioural confirmation and status.

In the above, we saw that there are considerable differences in the way the five first-order instrumental goals were operationalised in the three main applications of SPF theory thus far. When we then look at the definitions of the first-order instrumental goals that were used in these studies, we find that these all differ more or less from the definitions in Lindenberg & Frey (1993).

For comfort, Steverink (1996, p. 19) gives the following definition:

“Voldoen aan de basisbehoeften van de mens zoals eten, drinken, rust, warmte en beschutting, levert fysiek welbevinden op en wordt hier ‘comfort’ genoemd. Ook de afwezigheid van pijn en ziekte, evenals van hulpbehoeftte, worden als bronnen van comfort beschouwd.”

Nieboer (1997, p. 33) deviates somewhat from this, by including in her definition of comfort only the absence of negative stimuli:

“Comfort means the absence of deleterious stimuli (i.e., physiological discomforts such as pain, thirst, hunger, or cold).”

By leaving out the part on satisfaction of basic needs like eating, drinking, resting et cetera, she leaves open - at least theoretically - that someone who does not satisfy these basic needs but lacks sensory stimuli that warn him of this may yet experience ‘comfort’. Nieboer’s definition of comfort does also not include the absence of dependency, as does Steverink’s definition.

Van Eijk (1997, p. 42) gives a definition that stands midway between Nieboer and Steverink:

“Comfort refers to a state where basic human needs are fulfilled, i.e., to the absence of

11 See footnote 4 of this chapter.
physical discomfort, such as hunger, thirst, fatigue and pain.”

It need not be deemed problematic that these definitions are slightly different. It is not unusual that in different applications of a theory the definitions of its concepts are somewhat adjusted to better suit the particular application. However, as Lindenberg, as the author of SPF theory, has not explicitly formulated how he defines comfort, we here have the difficulty that we cannot assess the extent to which various definitions of comfort differ from the ‘original’ definition in SPF theory. A more important problem with the definition of comfort exists in relation to the definition of stimulation.

Regarding stimulation, Steverink (1996, p. 19) writes that

“fysiek welbevinden afhankelijk is van het ervaren van een plezierige hoeveelheid stimulatie of activering.[...] Stimulatie leidt niet steeds tot fysiek welbevinden. De relatie tussen de mate van stimulatie en fysiek welbevinden kan weergegeven worden als een eentoppige curve: een laag stimulatieniveau (onderstimulatie) wordt als onaangenaam ervaren terwijl ook een te hoog stimulatieniveau (overstimulatie) als onaangenaam wordt ervaren. Alleen in dat gedeelte van de curve waarin stimulatie fysiek welbevinden oplevert, wordt het in positieve zin als bron voor fysiek welbevinden opgevat.”

It is remarkable that Steverink describes the relation between the level of stimulation and physical well-being as a single-peaked function, whereas we saw before that Lindenberg (1996, p. 173) explicitly states that the idea of an optimal level of arousal is misleading:

“...suggests that there is a single peaked utility function and that the individual maximises utility by achieving the optimal level of arousal. By contrast, the empirical evidence [...] points in a different direction. The organism seems to receive pleasure from both a reduction in arousal (i.e. from increasing comfort) and from an increase in arousal (i.e. from increasing stimulation) within a large range of arousal.”

I believe that Lindenberg suggests that within ‘the pleasant range’ it is actually changes in the level of stimulation from which one derives utility rather than stimulation per se.

Van Eijk gives a more definition-like description of stimulation:

“Stimulation refers to a state of arousal, or the extent to which an optimal level of interesting and challenging events is experienced.” (Van Eijk 1997, p. 42)

In this definition mental stimulation is central and it is not really clear whether Van Eijk considers physical exertion and arousal as part of stimulation as well. Nieboer (1997, p.33), in contrast, does explicitly include the more physical aspects of arousal in her definition. She also appears to attempt to reconcile the two opposing positions regarding the possible single-peakedness of the utility function:

“Stimulation refers to activation which produces arousal, including mental and sensory stimulation and physical effort. Human being seem to prefer a certain level of activation, although prolonged levels of high activation or physical effort become unpleasant. Seen across the full range, physical well-being and activation are related as an inverted U (Hebb, 1958, Scitovsky, 1976, Wippler, 1987).”

The various definitions differ considerably and leave us in uncertainty about what the first-order goal stimulation in SPF theory now really does and does not encompass. A more serious problem is that the distinction between the two first-order goals for physical well-being is not clear either. For, if empirical evidence does indeed point out that humans need some level of mental, sensory and physical arousal to be ‘well’, and if comfort is equated to a state in which people’s basic physiological needs are met, it would seem logical to subsume stimulation as one of the lower order instrumental goals for comfort, rather than regarding it as a first-order
goal positioned beside comfort.

Status, one of the three first-order instrumental goals for social well-being, is defined by Steverink (1996, p. 19):

“Status is sociale waardering die verkregen wordt op basis van het relatieve bezit van schaarse goederen zoals privileges, geld, talent, macht, invloed, bepaalde soorten kennis, luxe goederen. Hoeveel status verkregen wordt uit dit bezit hangt af van de verdeling van deze goederen, dus status onderscheidt mensen relatief ten opzichte van elkaar - het is een positioneel goed. Status kan gerealiseerd worden door dingen die zijn verkregen zonder eigen moeite of kosten, zoals bijvoorbeeld een adellijke titel, maar in een westerse samenleving wordt status meestal verkregen door wat iemand doet of verwerft (inkomen, statusgoederen), en dit wordt vooral via het uitoefenen van een beroep bereikt.”

Both Van Eijk (1997, p. 42-43) and Nieboer (1997, p. 33) define status somewhat more concisely, but in a very similar vein. Van Eijk puts extra emphasis on that it is the scarcity of goods that determines their status-lending properties. All definitions agree on three important elements: status refers to someone's relative ranking in society, it is based the control over scarce goods, and it is multi-dimensional, that is, there are multiple goods that each may lend status.

Of all five first-order instrumental goals that are distinguished in SPF theory, there appears to be least confusion about the exact content of status. This may be attributed to the fact that the concept of status is very familiar to social scientists (be it, however, that many have learnt to think of status primarily as socio-economic status or occupational prestige, while the status-concept in SPF theory is broader than that). It may also be that the core of the concept, the ranking of a person as compared with other persons, is just unambiguous.

However, there are also some problematic aspects to the definition of status, in particular regarding the questions what reference groups we should take. Does ‘status’ in the SPF theoretical framework refer to one’s rank in the whole national society, or rather to the reference groups a person himself chooses? It seems that the latter makes more sense when we are interested in subjective social well-being, but there are also important practical arguments for preferring the first (e.g. the unfeasibility of assessing for each person for all dimensions of status which are the relevant others with whom he tends to compare himself). The problem of reference groups and reference shift forms a complete field of research, a glance on which convinces us that there is no easy way out of this problem.

Another problem regarding the definition of status follows from the multidimensionality it proposes. Should we really conceive of status as including all relative positions based on all scarce goods? This again might lead to impracticability, for how can we assess which are all the scarce goods? And as scarcity is the ratio of the availability and the valuation of goods, and as people may differ in their valuation of goods, it may be the case that what is ‘scarce’ for one person is not scarce for another.

The second of the first-order goals for social approval, behavioural confirmation, is described by Steverink (1996, p. 19-20) as:

“Het is het gevoel het ‘goede’ gedaan te hebben in de ogen van belangrijke anderen of van jezelf. Wanneer de reactie van de ander gemakkelijk kan worden voorspeld - zoals bijvoorbeeld door de aanwezigheid van duidelijke sociale normen - zal ook de anticipatie van de reactie van de ander al het gevoel van waardering geven, waardoor gedragsbevestiging ook kan worden ervaren wanneer die ander niet aanwezig is.
Gedragsbevestiging heeft daarom te maken met het voldoen aan verwachtingen, zowel persoonlijke als sociale. [...] Het gaat bij gedragsbevestiging vooral om normconform gedrag, en niet in de eerste plaats om wat iemand is als persoon, zoals bij affectie.”

Van Eijk adds a few elements in her definition of behavioural confirmation, namely that the result or subjective experience of behavioural confirmation is a feeling of acceptance and confirmation in one’s activities, that there is also a negative form of behavioural confirmation that people want to avoid, and that the main contrast with status lies in the fact that status is about distinguishing oneself from others while behavioural confirmation is about fitting in and assimilating oneself to a social group:

“Behavioural confirmation refers to the horizontal component of social approval. Contrary to status, it is not produced by distinguishing oneself (positively) from others, but by behaving in accordance with the customs and norms of a group of significant others. Others then make one feel accepted and confirmed in one’s activities. Conversely, behavioural disconfirmation is something people want to avoid” (Van Eijk 1997, p. 43).

Nieboer (1997, p. 33) is even more concise:

“Behavioural confirmation is the feeling to have done ‘the right thing’ in the eyes of relevant others. For example, conformity to norms is instrumental in obtaining behavioural confirmation.”

The way in which this definition is phrased suggests, in contrast to the definitions above, that there may be other ways of obtaining behavioural confirmation than behaving according to the norms of relevant others. It is not clear however, which these possible alternative production factors would be.

The main problem in the definitions of behavioural confirmation is related to the term relevant others. It may seem trivial to point out that this term does not specify who exactly are these ‘relevant’ others, for a definition like this should be general. However, it may be argued that the question of who are ‘relevant others’ for an individual is not unrelated to the question of whom he receives behavioural confirmation. It seems but too plausible that anyone who more or less consistently gives you behavioural confirmation, and thus contributes to your level of social approval, would become a ‘relevant’ other. Is this what the definition intends to tolerate? Or do the authors intend a more restricted set of ‘relevant others’, for example restricting this set to ‘others’ that are important for the individual not only with regard to obtaining behavioural confirmation but also regarding the realisation of other goals? If so, this should be made explicit, and it should be accepted that such a definition implies that there is always multi-functionality in the production of behavioural confirmation.

When looking at the concept of behavioural confirmation against its theoretical background, namely Lindenberg’s (1986, 1997) sharing group theory and his ideas about the emergence of social norms, the most natural answer to this question would be to define ‘the relevant others’ as the persons with whom one forms a sharing group. However, as most people belong to many, partly overlapping and partly antagonist sharing groups, this answer seems to shift the problem rather than solve it. Yet this perspective offers an important insight concerning the question of who are the ‘relevant others’. Sharing groups are, by definition, groups for joint production or consumption of goods. Now according to SPF theory, all things that people would want to produce can be categorised as forms or instrumental goals of the five first-order instrumental goals. It then follows that ‘relevant others’ are ‘relevant’ because of their role in the realisation of one or more of these five goals. However, the definition of behavioural confirmation would be circular when we would allow the term ‘relevant others’ to refer to
others that are only relevant for the realisation of behavioural confirmation. Thus, following this line of reasoning, the ‘relevant others’ in the definition of behavioural confirmation, are those who play a significant role in the production of the four others first-order goals. Behavioural confirmation would then, at least in general, be a by-product of the participation in sharing groups that serve the realisation of other goals. Yet, in theory, sharing groups may exist whose main and only purpose is the production of behavioural confirmation. If they do, and if the approval for behaviour that is received from members of such groups contributes to the level of subjectively experienced behavioural confirmation just like the approval from different others, I believe the definition of behavioural confirmation needs adjustment: the term ‘relevant other’ can, in that case, no longer serve the purpose.

It should in any case be clear that the concept of ‘relevant others’ is problematic. From the literature on group theory (e.g. Sherif 1966; Turner 1982; Hogg & Abrams 1988), it is known that groups as a rule exist by the grace of outgroups or competing groups, and that groups norms usually tend to emphasise group boundaries. This of course implies that in obtaining behavioural confirmation for conforming to norms of a particular (group of) others, one often automatically incurs behavioural disconfirmation of outgroup-people (at least as far as one’s behaviour is observed by them or as far as one has internalised their behavioural norms). As, following the definition of Van Eijk, people tend to avoid behavioural disconfirmation of ‘relevant others’, the question as to whom are one’s ‘relevant others’ becomes extra pressing.

A further problem I find is that in fact behavioural confirmation is defined more by the (main?) instruments through which it is produced, than by its own quality. That is, in the definitions there is considerably more clarity about how behavioural confirmation comes about (through norm conforming behaviour, although Nieboer leaves open the possibility that there may also be other means of producing behavioural confirmation), than about what this ‘good’, once produced, is. Is the component of social well-being we call behavioural confirmation only to be distinguished from status and affection by investigating how it has been obtained, or is there a real difference in the phenomenology of the three different first order goals? If so, it seems preferable to define the three first-order goals according to these phenomenological characteristics, or at least to incorporate them more prominently in the definitions of these goals. Especially if we want to allow for alternative production functions leading to the realisation of the first goals (an allowance that seems warranted by the core ideas of SPF theory) it seems more elegant to phrase the definitions of the first order goals with minimal dependence on examples of how they are produced.

Finally, we come to the definition of affection. Steverink (1996, p. 20) states:

“Affectie wordt verkregen wanneer twee personen om elkaar geven en elkaars welzijn belangrijk vinden. In tegenstelling tot gedragsbevestiging is affectie altijd persoonlijk en gaat het niet zozeer om de waardering van het juiste gedrag als wel om de waardering van de persoon. Aangenomen wordt dat het in beginsel mogelijk is ook doelbewust de voorwaarden te scheppen die naar verwachting affectie opleveren, zoals - naast het voldoen aan verwachtingen - het geven van extra aandacht, hulp of geschenken.”

Van Eijk’s (1997, p. 43) definition of affection is largely similar, but she explicitly excludes interdependence of well-being as an essential characteristic of the relationships in which affection may be obtained. Other than Steverink, who’s definition actually only specifies the means through which affection may be obtained, Van Eijk does make an attempt to describe
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the quality of ‘affection’ as a good, when she mentions ‘love’, ‘companionship’ and ‘the 
feeling that someone cares about you’ as examples of what it is that people get from affective 
relationships:

“[A]ffection refers to what people get when they are involved in affective relationships, for 
example love, companionship, the feeling to be cared for. Contrary to behavioural 
confirmation, affection refers to being accepted for who one is as a person, rather than 
being evaluated on specific activities.”

The definition Nieboer (1997, p. 33) gives is again very similar to that of Van Eijk; it only 
seems to slightly diverge from this in putting somewhat more weight on the closeness and 
quality of the affective relationship:

“Affection is what a person gets from another person when they are involved in a close and 
caring relationship (partner, friends, or family). It is the love one gets for who one is as a 
person, regardless of one's assets or actions.”

In these three definitions of affection, two points need be noted. Firstly, in all three 
definitions, affection is distinguished from behavioural confirmation by stressing that it is 
approval of who one is rather than approval of what one does. It is not very clear, however, 
how others can know ‘who one is’ other than through one’s behaviour (behaviour includes 
what a person says about himself). And also, from daily experience it should be expected that 
behavioural confirmation and affection are frequently received from the same persons, and 
frequently at the same time as well. So, using the above definitions, it would be quite 
problematic to find affection empirically. Theoretically it is the question whether ‘affection’ 
should really be conceptualised as whatever remains after stripping off all approval for what 
one does.

The second point that deserves to be noted is the fact that all three definitions above restrict 
the possible sources of affection to ‘affective relationships’. This would almost be a tautology 
if the term ‘affective relationships’ were not explained as relationships in which people are 
‘close’, where they care about each other and about one another’s well-being. The important 
question here is whether these definitions imply that only within such close and caring 
relationships one can get affection, or whether these relationships are again intended as an 
example of the most common production factor for affection. The former interpretation would 
mean that affection can not be obtained from strangers, in other words, that the only things 
persons with whom we do not have a close and caring relationship can contribute to our social 
well-being are status and behavioural confirmation. This is an implication I seriously doubt, 
and I believe empirical research may help to solve this problem.

Summarising the discussion of definitional problems of the first-order instrumental goals thus 
far, it appears that, although for most of the five goals the essence of the concept is intuitively 
clear, the precise content is not. The three authors who have applied SPF theory in empirical 
research appear to have used somewhat diverging definitions, which tend to define the goals 
in terms of how they may be reached.

It is important to appreciate why definitions that mainly describe a goal by the means by which 
it may be reached are problematic. Such definitions collide with SPF theory’s intention to 
provide more than merely a classification scheme. An essential feature of SPF theory is the 
hierarchical ordering of goals linked through production functions, which is crucial for 
analysing substitution effects. This feature makes sense when it is assumed that, for each 
production function linking two levels in the hierarchy of goals, the ‘good’ at the output side 
is of a different quality than the ‘goods’ or resources that are used as inputs. With regard to the
levels of the universal and the first-order instrumental goals and the uppermost level of overall subjective well-being, SPF theory claims that this is indeed the case. The assumption of limited substitution between first-order goals implies the claim that e.g. status, behavioural confirmation and affection each are a ‘good’ that is qualitatively distinct from the various production factors involved in their realisation. Therefore I think it crucial that this claim is supported by the way in which the first-order instrumental goals are conceptualised and defined.

Apparently, we have some difficulty in defining the substantive ‘goods’ that three first-order goals for social approval represent, and for the purposes of the three applications of SPF theory we discussed, the solution of defining these goals by the means to their realisation was quite satisfactory. But in the long run, SPF theory would expose itself to the risk of being discarded as merely a classification scheme, if it would not succeed in conceptualising and defining its main theoretical concepts more independently from the means for their production.

For working with these concepts much could be gained by a systematic exploration of the relations between levels of these goals and the variety of means involved in producing them, so that all these elements related to the first-order goals might be ordered according to their different extent of ‘goal-ness’ or ‘resource-ness’.

We further saw that in some cases the distinction between two first-order goals is blurred (comfort and stimulation) while for other goals the distinction is perhaps unrealistically absolute (affection and behavioural confirmation). For each of the five first-order goals, empirical evidence that would help identify the precise content and the relation to the other goals would be welcome.

At the start of this subsection, it was remarked that perhaps the main problem regarding the conceptualisation of the first-order instrumental goals follows from the problems explained in 3.4.1. regarding the conceptualisation of the two universal goals and overall well-being. If the more audacious assumptions are made that social and physical well-being are the exhaustive components of overall subjective well-being and that there are no ‘paths’ to overall well-being than through these, it necessarily follows that the five first-order goals in their turn cover completely all aspects of well-being as well. This means that it should be possible to categorise any aspect of overall subjective well-being that may be observed in any person, as belonging to one of the five first-order instrumental goals (or to the lower levels of the production functions that lead to these). If one chooses this ambitious assumption, it is doubtful whether the current definitions of the first-order goals are sufficiently broad and flexible to meet the demand that all aspects of well-being should be accommodated in them. It would be highly desirable then to develop some classification scheme that gives a broad overview of aspects of well-being (both from the literature and from empirical evidence) and connects these to the first-order goals in which they are presumably reflected.

If the more cautious assumption is made that leaves open the possibility that social and physical well-being are not exhaustive for all aspects of overall subjective well-being, our five first-order goals need not cover all possible aspects of well-being. In this case, however, it is no less desirable to sharpen the definitions of the five first-order goals, even if it were only to be able to judge when a particular aspect of well-being does or does not fall inside the framework of SPF theory.
3.5. **The necessity to further elaborate lower level goals and quality aspects of social production functions**

While solving the problems concerning the conceptualisation and definition of the universal and the first order instrumental goals (cf. section 3.4.) appears to be important for SPF theory per se, our aim of applying SPF theory to quality of life research entails some new demands on the theory, which it will only be able to meet when some more problems are solved and some more elaboration is achieved.

The main new demands appear to be the specification of the most relevant resources and conditions for the realisation of subjective well-being and the accommodation of the dual character of well-being, as found in Quality of Life research, within the conceptual framework of SPF theory (i.e. representing both the affective or hedonic component of subjective well-being and the cognitive or life-satisfaction component). In 3.5.1., the possibilities of meeting the first demand are discussed; the second demand is considered in section 3.5.2.

3.5.1. **The specification of relevant resources and conditions: elaborating the hierarchy’s lower levels**

As we saw in 3.2., SPF theory was originally intended as a search heuristic, that could be used as a tool to identify actors’ interests and to predict and explain their goal directed behaviour in diverse behavioural situations. As such, SPF theory is suitably elaborated: the upper levels of the instrumental hierarchy of goals (the universal and the first-order instrumental goals) are specified, and the lower levels of the hierarchy are - apart from the few examples of conventional production factors that are repeatedly given - left open. This is exactly as it should be when we want the general model to be applicable in any historical and cultural context, and when we feel sufficiently sure of our own insight in the behavioural situations under study. As long as we feel reasonably sure that we understand the situation that we try to model, including the potential behavioural alternatives of the actors and the gains and sanctions related to these, we do not need a more specific theory or further elaborated heuristics. In dealing with such models, it is generally not too difficult to arrive at plausible assumptions about the relevant situational goals (and how they relate to the first-order instrumental goals) and about the salient resources and restrictions for realising these goals.

It is a different situation, however, when we want to apply SPF theory to the core concern of quality of life studies, that is, to the question of how subjective well-being is related to objective living conditions, available resources and sets of behaviour. In principle, SPF theory encompasses the complete process in which highly concrete resources are converted into the highly abstract ‘overall well-being’. However, whereas the theoretical framework is elaborated for the highest (most abstract) levels of the instrumental hierarchy, for which it claims to present an exhaustive list of goals, it is silent with regard to the lower, more concrete levels. For these concrete levels of resources and activities the theory at best provides some examples, without either the claim or the intention to be exhaustive. Indeed it would run counter the basic notion of SPF theory to assume that the set of possible production factors, at the most concrete level, could be delineated for all groups, all cultures, all societies and all times. Any attempt to arrive at a reasonably ‘complete’ set of potential concrete production

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12 Be it that the elaboration is in some respects not yet satisfactory, see section 3.4.
factors would undoubtedly perish under the innumerability of resources and activities people may use to further their interests. Yet, it may still be useful to investigate lower level goals that are at least general to western cultures. Principally, it should not be the aim to make an inventory of most relevant concrete production factors. Not only would there be too many, but the idea that the relevance of production factors is equal for different individuals is in direct opposition to the notion of substitution in SPF theory. Some resources that are quite irrelevant for the majority of the population, because they have a superior resource for the same aim, may be of utmost importance to the people who have no access to the superior resource (a far less extreme case is e.g. the importance of having public transport close by for people who do and do not own a car).

Yet, for the task of establishing the relation between subjective well-being and objective conditions, we do need to extend and improve our knowledge about what resources and conditions people need to realise the first-order goals for social and physical well-being. At present, it is not clear how, and even whether, this problem can be solved, but it is clear that without solving it, SPF theory is unlikely to help achieve progress in quality of life studies. The best policy, therefore, might be to attempt shifting the boundary of the elaborated part of SPF theory downward to lower levels of abstraction until the diversity of relevant production factors becomes too much to handle. It is likely that we can go beneath the level of the first-order instrumental goals without immediately drowning in diversity and, if so, we will at least have approached the objective of finding out how objective conditions relate to eventual well-being. In order to be able to shift downward the boundary of the elaborated part of SPF theory it seems that empirical research is required. Although a theorist may be able to think of a great many alternative ways to produce e.g. status, he will still to some extent be biased by his own life history and position in society and overlook many of the alternatives that people in very different circumstances might use. I believe it therefore necessary to investigate the production functions of people from very diverse categories of the population, so that the elaboration of the less abstract levels in SPF theory will suit a broad range of people.

It is, I believe, a sensible aim to attempt the refining and elaboration of the search heuristic. If it can be reconstructed how people in very diverse situations produce social and physical well-being, and what concrete resources and activities they use in the production, it may be possible to derive a more refined search heuristic. If SPF theory as a heuristic tool can be elaborated such that it helps us to recognise different types of situations and for each of these points out to us what are the main (theoretical) factors that determine the possibilities to realise the first-order goals there, we have in any case come closer to the situation in which we can link subjective well-being to objective and concrete conditions.

It is important to consider at this point the implications of the above for the eventual contribution SPF theory may make to quality of life studies or social accounting. Given the features of this theory, what can it be expected to have to offer in terms of well-practicable conceptual frameworks for monitoring and explaining variations in subjective well-being? And is the potential value of this contribution sufficient to legitimise the efforts to realise it? In order to answer these questions, we need to look again to the status quo in Quality of Life research sketched in Chapter 2. It was discussed there that for years now there coexist increasingly sophisticated measures for both subjective well-being and series of objective conditions that are thought to be related to subjective well-being, but that neither kinds of
measures is sufficiently informative in itself, while the causal relations between the two kinds of measures are unclear. The main problem with measures of subjective well-being per se, even when leaving aside the question whether subjective well-being should be the ultimate criterion of ‘quality of life’, is that they do not inform policy makers and others about the causes for differences and changes in subjective well-being. The main problem with measures of ‘objective’ conditions per se is the reverse: without a clear causal model of how objective conditions are related to subjective well-being, and which conditions are complements or rather substitutes in the realisation of a high quality of life, the criterion to judge or evaluate changes and differences in objective conditions is lacking.

What is wanting in quality of life studies as well as for policy making et cetera, is a model of how objective conditions and subjective well-being are linked, a model from which it is possible to derive a (sufficiently small to be practicable) set of variables representing objective conditions, the causal relations of which to subjective well-being are explicated.

An analogy may clarify the point. In dietetics the central issue is what people should eat to attain and maintain an optimal nutritional state. The nutritional state of a person could, in theory at least, be monitored physiologically, which would give perfect information on the ultimate target variable. However, this would leave the dietician empty-handed regarding the changes that should be made in eating habits. If, in contrast, the dietician would only be informed about his patient’s daily intake of potatoes, milk, oranges and bread, he could not do his job either. Not only would he in the latter case want some indication of the patient's nutritional state as an evaluative criterion, but he would also need to know all other things the patient eats and drinks. Dieticians have therefore developed the so-called schijf van vijf: a concise model of the five principal ingredients of a proper diet. The schijf van vijf is a model in which diverse foods can be categorised according to which of five essential nutritients (protein, carbohydrate, fat, vitamins, minerals) they provide. Within the five categories, the various foods may be substituted (almost) at will, but the total intake of each of the five principal ingredients should be between well-established levels in order to keep healthy. For the question of subjective well-being and its ‘ingredients’, the present practice resembles that of a dietician who attempts to give nutritional advice on the basis of information about the patient’s weight and height, and his daily intake of milk, oranges, potatoes and bread, without knowing which are the essential ingredients of which at least a certain level should be consumed and thus, without knowing which foods might be adequate substitutes for those monitored in his present index.

According to SPF theory now, the nature of subjective well-being and its relations with objective conditions is in a sense similar to that of nutritional health. Like in nutrition (and even more than there), the possibilities for substitution at the most concrete level of production factors (here: resources and activities; in nutrition: foodstuffs and drinks) are almost unlimited, and the number of potentially relevant items greatly exceeds the maximum of what can reasonably be monitored. Yet, so SPF theory claims, it is possible to distinguish a number of essential ‘ingredients’ of which a minimal amount should be had, in order to prevent subjective well-being from dropping below a certain minimum level. Crucial for these ‘ingredients’ is the claim that substitution between them is limited: for each of the first-order instrumental goals there is a minimum level of the first-order instrumental goals that people need to experience well-being, and only above that level substitution across first-order goals may take place. The means to obtain a sufficient amount of each of the first-order goals are many, however. What does this imply for the possible form which a framework of (objective)
indicators for the conditions to attain subjective well-being could take, when we start out from SPF theory? What should the set or system of indicators we eventually aim to develop look like?

It appears that the analogy of the schijf van vijf also provides an example of how a meaningful system of indicators of conditions for well-being can be constructed. Such a system would not rely solely on a measure of subjective well-being, nor would it need to include an exhaustive inventory of relevant resources or conditions and their potential substitutes. The representation of the structure of subjective well-being and the possible ways of realising it in SPF theory, suggests a system of indicators for subjective well-being that reflects the following: 1) there are two main components to subjective well-being between which only a substitution is possible only to a limited extent; 2) there are five more specific components of subjective well-being, two and three for the respective main components, of which a person should have at least a minimal amount each (thus, only above this minimal level it is possible to substitute between these five components without incurring a loss of subjective well-being); 3) for the realisation of the minimal levels of the five essential components of well-being, people may employ almost any resources and activities, but (as it is likely that these potential production factors differ for the five essential components of well-being, as the particular character of the five components differs as well) the potential production factors may be ordered according to which of the five essential components they particularly serve.

A system reflecting these points may be applied in assessing empirical situations as follows. It identifies a number (it cannot be said yet how large this number will need to be, hopefully 20 to 30 indicators will suffice) of objective conditions or resources that are relevant for the level of subjective well-being that may be realised, these objective factors being categorised into five groups (there is no objection to certain factors appearing in more than one category). The five groups in which the objective factors are categorised correspond with the five first-order instrumental goals of SPF theory, such that it can be said that the factors within one group should combinedly amount to a certain level below which the realisation of a minimal level of the corresponding first-order goal is in jeopardy, and above which it may be said that the objective conditions are sufficient for the potential realisation of a minimal level of that first-order goal. The extent to which objective conditions suffice for the realisation of more than minimal levels of the five first order goals, the five ‘essential ingredients’ for subjective well-being, then provides the criterion upon which to judge the quality of the objective conditions. Figure 3.2., which depicts an overturned version of SPF theory’s hierarchy of goals, may help to clarify the system of objective indicators and their theoretical interpretation that we would eventually like to arrive at.

If our aim is to apply SPF theory to the core problem of quality of life studies, and establish a systematic link between indicators of objective conditions and the level subjective well-being they make possible, the efforts to elaborate the theory in the lower levels of the hierarchy of goals should be guided by the features of the system of indicators we wish to obtain. This task can thus be formulated as follows: in order to prepare SPF theory for application to quality of life studies, the lower levels of its hierarchy of goals should be elaborated such, that a list of objective (pre)conditions can be specified for each first-order goal respectively, and that for each group of objective (pre)conditions it is clear (a) whether each factor is located within the individual person or in external conditions at local or larger levels; (b) how the (pre)conditions are interrelated, that is, which factors may serve as alternatives and which factors require each other as complements.
<table>
<thead>
<tr>
<th>Objective indicator I-1</th>
<th>conditions for realising</th>
<th>COMFORT</th>
<th>potential to realise</th>
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<tbody>
<tr>
<td>Objective indicator I-2</td>
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<td>Objective indicator I-…</td>
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<td>Objective indicator I-x</td>
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<tr>
<td>Objective indicator II-1</td>
<td>conditions for realising</td>
<td>STIMULATION</td>
<td>potential to realise</td>
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<td>Objective indicator II-2</td>
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<tr>
<td>Objective indicator II-…</td>
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<td>Objective indicator II-x</td>
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<tr>
<td>Objective indicator III-1</td>
<td>conditions for realising</td>
<td>STATUS</td>
<td>potential to realise</td>
</tr>
<tr>
<td>Objective indicator III-2</td>
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<td>Objective indicator III-…</td>
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<tr>
<td>Objective indicator III-x</td>
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</tr>
<tr>
<td>Objective indicator IV-1</td>
<td>conditions for realising</td>
<td>BEHAVIOURAL</td>
<td>potential to realise</td>
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<tr>
<td>Objective indicator IV-2</td>
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<td>Objective indicator IV-…</td>
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<td>Objective indicator IV-x</td>
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<tr>
<td>Objective indicator V-1</td>
<td>conditions for realising</td>
<td>CONFIRMATION</td>
<td>potential to realise</td>
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<tr>
<td>Objective indicator V-2</td>
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<tr>
<td>Objective indicator V-x</td>
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</tbody>
</table>

Figure 3.2.: Schematic representation of SPF-theory based system of indicators for well-being

In performing this task we need not, and indeed should not, attempt to go to the lowest possible level of abstraction, as this will result in an impracticable number of potentially relevant factors, but we should seek to move away from the still subjective level of the five first-order goals towards the first level in the hierarchy where objective conditions can be distinguished as production factors.

3.5.2. THE DUAL CHARACTER OF SUBJECTIVE WELL-BEING: INCORPORATING THE COGNITIVE COMPONENT

It is well accepted in quality of life studies and subjective well-being research, that subjective well-being encompasses two components: the affective and the cognitive component (cf. Diener et al. 1999; Lucas, Diener & Suh 1996; see also Chapter 2). Although there is no agreement yet on how exactly these two components interact and combine to form ‘overall
well-being’ (it is most probable that both affect each other as well as overall well-being), there is broad consensus that the affective and the cognitive component complement each other, and that subjective well-being should not be reduced to either one of these.

In SPF theory, no explicit distinction is made between the affective and the cognitive component to overall subjective well-being, and it is not immediately clear whether both component are represented in the theoretical framework. Again, this of course depends partly on the exact definitions of the concepts at the highest levels of the hierarchy of goals. But if we start out from the present definitions of the various goals, it appears that SPF theory is largely concerned with the affective component of well-being and says much less about the cognitive component. For, presently, the first-order instrumental goals (excluding status) are defined as ‘the feeling to have done the right thing’, ‘the feeling to be loved’, ‘a pleasant level of arousal’, and ‘the absence of unpleasant stimuli’. These wordings suggest that what SPF theory deals with is predominantly the affective component of well-being. Yet, if we want to apply SPF theory to the core problems of quality of life studies, this one-sidedness is a serious impediment. It would be highly desirable if either the definitions of the main concepts or the conceptual framework itself could be adjusted to represent both cognitive and affective components.

Indeed, some suggestions in that direction have already been made. In the above (section 3.4.1.) the ‘safety-need’ was relegated to the realm of metagoals, that is, it was acknowledged that safety is probably a rather general and important human goal, even though it is a different kind of goal than the first-order instrumental goals for subjective well-being (cf. Lindenberg 1996, p. 180-181).

Metagoals represent all goals or preferences people may hold with regard to the form and quality of their production functions. Thus, while the goals serving the realisation of social and physical well-being (to which the discussion in this chapter thus far has been restricted) have to do with the level or output of production, metagoals refer to the production process itself, including the care for maintaining one’s production capacity. In terms of a metagool, the safety motive refers to the goal of protection one’s production functions and production capacity from disturbances. Assuming that people have sought to find the most profitable production functions given their set of behavioural alternatives, it is obvious that they have an interest in preserving these production functions and, thus, in avoiding new restrictions or loss of relevant resources.

But there are more aspects of production functions that do not have a place in the basic model of hierarchically ordered instrumental goals and may belong to the metagoals. Steverink et al. (1994), but also Sanders (1991) clearly show that people do anticipate life events and future changes in their production functions and production capacity, and that they often actively try to deal with these. People make their choices according to expected future outcomes (the RREEM-model of man, cf. Chapter 2; however, when allowing for bounded rationality neither their perception of future outcomes nor their subsequent behaviour need be fully rational). Thus it is possible that people choose to invest in a future outcome through behaviour that in the short run is not very agreeable, such as studying in order to attain qualifications for the moment in future when one will enter the labour market, or weight lifting in preparation for a

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13 E.g. Carver et al. (1996) argue that the process of moving towards the fulfilment of aspirations may be more important to well-being than the end state of goal attainment. See also Ormel et al. (1999, p. 63) on autotelic theories of well-being, and Diener et al. (1999) for a broad overview of relevant studies.
rowing race. This kind of investment behaviour, that typically lowers immediate hedonic well-being, although it need not lower immediate overall well-being because of the cognitive satisfaction it gives, is exactly the kind of behaviour that the time use approach to subjective well-being (see section 2.3.2) is unable to deal with.

Thus, people’s cognitive capacities not only enable them to behave proactively and invest in their future, but they also allow people to derive cognitive well-being from the knowledge that their present hard work or present troubles will bring a reward. This assertion is fully in keeping with the theoretical foundation of SPF theory, but yet it is not clear how these cognitive aspects would be incorporated in the basic conceptual framework. Perhaps the anticipated development of one’s production capacity should, like safety, somehow be represented in the metagoals.

A further cognitive aspect of subjective well-being that is frequently paid attention to in Quality of Life studies is the choice and effects of reference groups, or social comparison (e.g. Diener & Fujita 1997; Lyubomirsky & Ross 1997; Buunk et al. 1990; see also Michalos’ MDT). Social comparison processes refer to the comparisons people continuously make between their own situation (accomplishments, wealth, status, happiness, etc) and the situation of others, and the evaluations of the differences that are observed. In (social) psychology there has been extensive research into the choice of reference groups (with what [kind of] people does a person compare himself), the different personality factors and situational factors that determine whether there will be upward or downward comparison, the use people make of the comparison information and the affective responses to either upward or downward comparison. In SPF theory’s basic form, social comparison processes only appear in relation to status. As was extensively discussed above, status is a positional good, determined directly upon the evaluation of the difference between one’s own position and that of (relevant) others. As far as status is received from others, the term social comparison is somewhat awkward because in psychological research it is generally used to denote intra-personal comparison of the self vis-à-vis others, but I think that the status that a person ascribes to himself is identical to the outcome of what is commonly called ‘social comparison’. However, there is more to social comparison than only its contribution to status.

Social comparisons may allow people to check their affective responses to their situation by providing an external standard, and thus contribute to the interplay between affective and cognitive appraisals of one’s quality of life. Social comparisons also provide a person with valuable information concerning the quality of his production functions, as well as their potential improvement or deterioration (cf. Ybema 1994). In this sense, social comparison processes are obviously closely related to the metagoals, namely to the pursuit of high-quality production functions.

There may be more cognitive aspects that affect overall subjective well-being than the aspects that I just discussed, but I believe these are the main relevant aspects. It may be the case that, just like for the physical and social well-being goals, the actual and concrete goals people report to strive for can appear in numerous different variations. Still, it should not be too difficult to find out whether a particular instrumental goal serves the realisation of one or more of the five first-order instrumental goals or whether it serves the quality of the production functions per se.

At present, the elaboration of the metagoals in SPF theory lags behind the elaboration of the substantial goals. In particular the inventory of metagoals and their relatedness to each other and to the goals from the instrumental hierarchy is insufficiently elaborated. If we want to
apply SPF theory to the field of quality of life studies, and do justice to the knowledge and insights that exist there, I think it is time to elaborate the rudimentary notion of metagoals in the theory, and try to accommodate in this way the insights about the cognitive components of subjective well-being from quality of life studies.

3.6. Conclusion and research questions for elaborating SPF theory

Although Lindenberg’s Social Production Function theory has been found a useful tool in a number of studies, it is at least desirable that it be further elaborated in a few respects before applying it to current problems in the field of quality of life studies.

In the foregoing sections of this chapter, three aspects or elements of SPF theory were identified of which it can be seen a priori that some elaboration will be needed. In section 3.4., the conceptualisation and definition of the two universal and five first-order instrumental goals was discussed, and I have argued that thus far the concepts have lacked clear delineations. Although the definitions appear sufficiently clear to convey the essence of the concepts, they leave too much room for confusion about the precise boundaries between the first-order goals, as well as between first-order goals per se (the level) and the means by which it may be reached (the production factors). To some extent, this unsharp delineation may be unavoidable because of the nature of the concepts it concerns: to some extent the experience of e.g. affection or behavioural confirmation may be in the very act of ‘producing’ or eliciting it; also, just because empirically the various first-order goals do just frequently manifest themselves together, it may be unrealistic to aim for definitions of each that completely exclude all elements of the others. Yet, for our aims it would be highly desirable to obtain a better view of the complete content of the first-order goals, as well as of their side boundaries (the delineations with the other first-order goals) and of their layer boundaries (the gradual delineations between the ‘real’ level of the first-order goals and the lower layers in the instrumental hierarchy: the means that lead to a certain level of the first-order goals). This problem of conceptualisation appears more pressing for the social well-being goals than for the physical well-being goals, and given the practical limitations of this study, I will therefore concentrate on the former. A first specific objective of this study is therefore to attain a more complete and in-depth conceptualisation of the three first-order goals for social approval, of the boundaries between them and between these goals and their respective production factors. The first research question is formulated accordingly:

\[ Q1: \text{What are the various and distinctive aspects of ‘status’, ‘behavioural confirmation’ and ‘affection’, respectively, and how and to what extent can the level of these goals be distinguished from the production factors that may be used to attain them?} \]

This research question will be explored and, as far as possible, answered to, in chapter 5.

The second point for elaboration that was identified in this chapter, concerns the system of more or less objective indicators we would want. Indeed, a system of objective indicators pertaining to conditions for quality of life or subjective well-being, that is based on explicit theory about the way these indicators relate to each other and to subjective well-being, is precisely what we found wanting in Chapter 2 (section 2.2.). The practical restrictions of this study do not permit the complete development and testing of such a system of indicators, but we do aim to make some steps towards that end. A second objective of this study is therefore to develop, on the basis of an exploration of the actual social production functions of people from diverse backgrounds and situations, a preliminary system of indicators that pertain to
production factors and conditions for realising social well-being. Thus, like in the first research question, this study is restricted to the social well-being component of overall well-being. The second research question reads:

**Q2:** What objective information concerning the availability of production factors at the individual level is needed in order to be able to predict (within reasonable margins) the level of social well-being that individual can attain?

More specifically:

**Q2a:** Which are the essential production factors for status, behavioural confirmation and affection, respectively, for Dutch adults?

**Q2b:** What are the complementarity or substitutability relations between these production factors?

In Chapter 6, it is considered how these research questions can be dealt with, and some answers are proposed on the basis of the data from the exploratory study.

Finally, it was argued that both the state of the art in subjective well-being research and previous writings on SPF theory suggest that the hierarchy of goals, that is comprised of physical and social well-being - both largely hedonic aspects of overall well-being - , does not represent all factors that affect overall subjective well-being. In particular with regard to the more cognitive aspects of subjective well-being, I have argued that they are not represented in SPF’s basic hierarchy of goals but as goals concerning the shape and quality-aspects of people’s production functions, or ‘metagoals’. At present, we have no empirical evidence for the relative contribution of these goals to overall subjective well-being as compared with the contribution of the goals from SPF theory’s basic model, but previous studies on the relative importance of hedonic and cognitive components suggest that it will by no means be negligible. SPF theory would certainly benefit if eventually these other aspects could be dealt with more explicitly. In order to make this possible, we need to explore the variety of goals that may fall outside the scope of SPF theory’s basic model, and find out if and how these goals can be modeled as metagoals. This is the third and final objective of the present study. The third research question is formulated as follows:

**Q3:** What goals do people strive for that cannot be interpreted as instrumental goals in the basic model of SPF theory, can these goals be modelled as metagoals (concerning the quality aspects of production functions) and if so, how?

This question is dealt with in Chapter 7, which concludes with the presentation of a conceptual framework of metagoals.