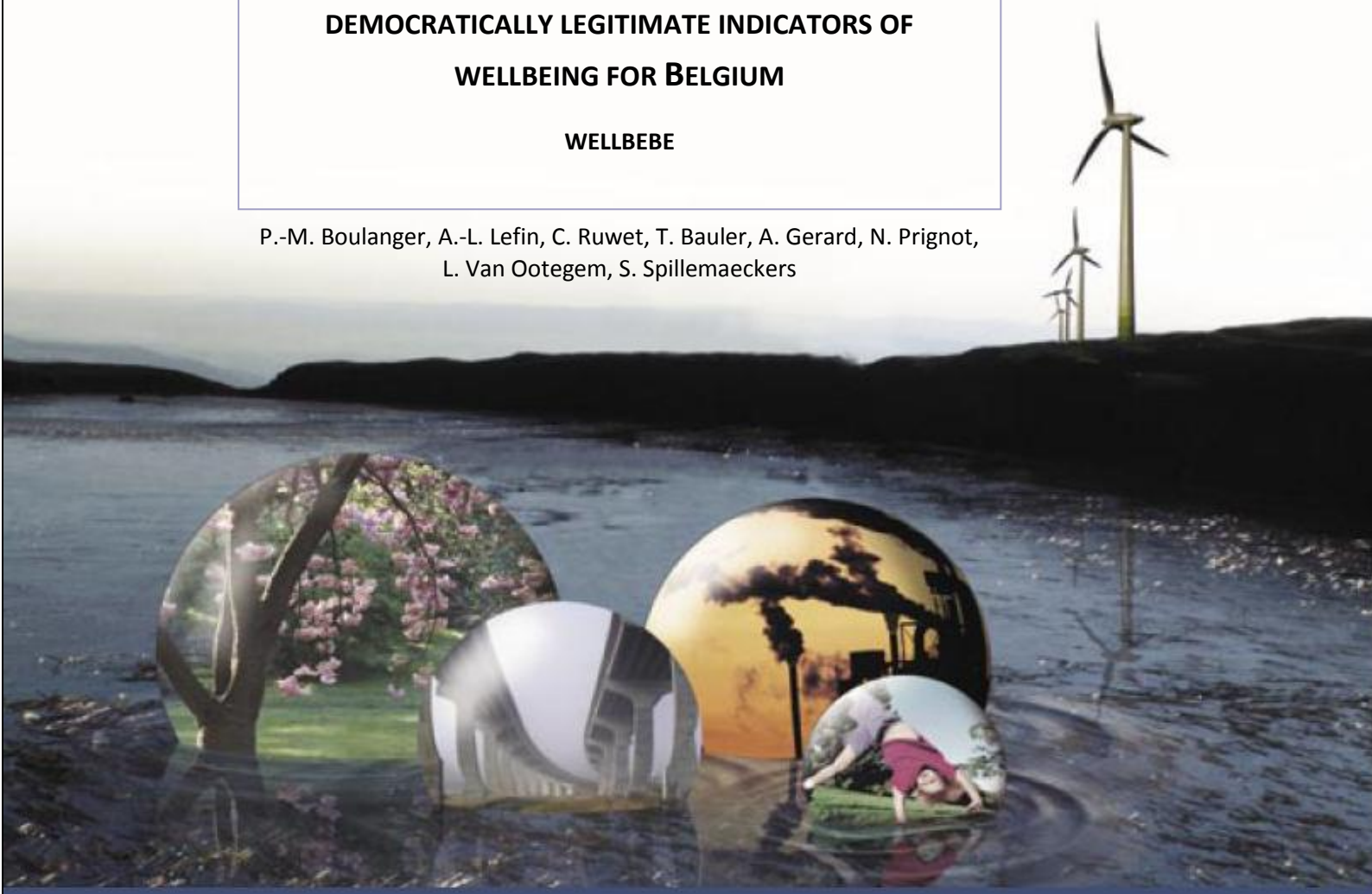
SSD

SCIENCE FOR A SUSTAINABLE DEVELOPMENT

TOWARDS THEORETICALLY SOUND AND DEMOCRATICALLY LEGITIMATE INDICATORS OF WELLBEING FOR BELGIUM

WELLBEBE

P.-M. Boulanger, A.-L. Lefin, C. Ruwet, T. Bauler, A. Gerard, N. Prignot, L. Van Ootegem, S. Spillemaeckers



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Toward theoretically sound and democratically legitimate indicators of wellbeing for Belgium

WELLBEBE

SD/TA/09

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D/2011/1191/43
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P.-M. Boulanger, T. Bauler, L. Van Ootegem, A.-L. Lefin, C. Ruwet, A. Gérard, S. Spillemaekers."Towards theoretically sound and democratically legitimate indicators of wellbeing for Belgium", Final Report. Brussels : Belgian Science Policy 2011 – 121 p. (Research Programme Science for a Sustainable Development)

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SUMMARY

Context

It is widely acknowledged that, if the production and consumption patterns of affluent societies have brought about an unprecedented level of material welfare, their requirements in terms of environmental resources and functions are such that they could not be extended to the whole earth population or to the future generations. On the other hand, the comparison between indicators of economic performance (GDP/capita) and other more specialized indicators of wellbeing such as the Genuine Progress Indicator, the Fordham Institute index of social health and many others – whatever their shortcomings – shows that, almost since the years 1973, more economic growth has ceased to be synonymous of more wellbeing for all. As long as GDP's growth correlated almost perfectly with improvement in wellbeing, there was no call for other measures of the effectiveness of our production and consumption patterns in bringing about wellbeing and happiness. Today, the historical marriage of relatively generic economic growth, a certain respect of global environmental limits and achievements in generating some improved societal wellbeing is broken. So, the definition of alternative wellbeing indicators becomes indispensable. It follows that the demand for indicators of wellbeing is emerging strongly, both at the international and national level. In the international and European policy context, the discussion of alternative indicators has been particularly revived in 2009. Most noted by international and national media, and thus policy makers, has been the presentation and publication of the 'Stiglitz-report' in September 2009. The report on the "Measurement of Economic Performance and Social Progress" was elaborated in 18 months by a commission chaired by J. Stiglitz, A. Sen and J-P. Fitoussi (www.stiglitz-sen-fitoussi.fr) and commissioned by the French presidential authorities. It has to be considered as a milestone in bringing to the mainstream – with the help of the credibility of the commission's members – the long-lasting critical voices and messages on current indicators of wellbeing.

The Stiglitz-Sen-Fitoussi Commission contended itself to stay within a mostly disciplinary economic reading and interpretation. Parallel initiatives emerged which more profoundly ask for a redeployment of our measures of wellbeing and welfare. Most notably, a second French initiative, the FAIR-network (Forum pour d'Autres Indicateurs de Richesses) helped to raise its members' voices in French media on shortcomings linked to the procedural setting and the content of the Stiglitz-Sen-Fitoussi Commission. It used the political momentum to ask for more innovative approaches to the measurement of progress (notably on the process to select indicators, or components of indicators). September 2009 saw also the presentation of the European Commission's policy paper on "GDP and beyond: measuring progress in a changing world" (www.beyond-gdp.eu) which developed the European

roadmap to the renewal of our measurements of wellbeing. In October 2009, the OECD's "3rd Worldforum on Statistics, Knowledge and Policy" held in Busan (Korea) raised identical messages as the Stiglitz-report for the ears of a large audience of international, transnational and national authorities (www.oecdworldforum2009.org). Simultaneously, but more locally, in Belgium, the Federal Planning Bureau's Task force Sustainable Development (www.plan.be) published in September 2009 its Federal Report on Sustainable Development entirely dedicated to the construction of an indicator framework and set, pursuing their objective to complement the mono-sided perspective on (sustainable) development provided by GDP. Finally, at regional level, the Walloon Institute for statistics, evaluation and future studies (IWEPS-statistiques.wallonie.be) organized a discussion seminar in December 2009 dedicated to the Stiglitz report, on top of which a Belgian antenna network of FAIR was initiated (Réseau FAIR Wallonie-Bruxelles). Since then, it has started an important program of defining and measuring wellbeing at the local level in a fully participatory way, with the methodological assistance of the Council of Europe.

Objectives and Methodology

The Wellbebe project aims at contributing to this common scientific and civic endeavor of building indicators of wellbeing in order to complement (or substitute to) GDP in assessing social progress and human development. As the title of the project makes clear, the requirement is to be both theoretically sound and democratically legitimate. By "theoretically sound" it is meant that wellbeing indicators should be justified on basis of rational theories of wellbeing and taking stock of the bulk of empirical scientific knowledge available. However, when dealing with normative concepts, we cannot be satisfied with scientific validity only. It is important to resist the "technocratic" temptation of proposing indicators of people's wellbeing only based on abstract theories of justice, wellbeing, health or economic development. A minimal requirement is at least to ask a sample of the population how they think about wellbeing and what language they use when talking about it. However, "democratic legitimacy" requires much more empowering and participative mechanisms than mere focus group or opinion polls. Ideally, indicators of wellbeing should come out of a co-construction process making use of deep deliberative mechanisms such as citizen's juries.

Practically, these concerns have dictated the organization of the research around the following working packages:

- Exploring, assessing and synthesizing (through a workable framework) the main scientific discourses on wellbeing ;
- Exploring people's way of talking of wellbeing in general (through focus groups and Q-methodology),

- Analyzing how people assess their own wellbeing (through surveys on capabilities, functionings and valuations),
- Experimenting with participative processes of co-construction of indicators of wellbeing;
- Ending with a decent, workable proposal of scoreboard and index and recommendations for structuring the process of building and interpreting wellbeing index.

As for the participative aspects, four different methods have been put to work: focus groups, Q-methodology, 'classical' surveying with econometric analysis (OLS and ordered logit) and citizens' panel.

Main conclusions

Even if, so far, wellbeing has mainly be looked at through the lenses of (welfare) economics, other scientific disciplines such as psychology, medicine, sociology, and anthropology have much to contribute to a comprehensive and reliable theory of human wellbeing. A deeper and more effective interdisciplinarity should govern the process of setting robust scientific foundations for wellbeing indicators.

True and effective interdisciplinarity needs a common framework in order to structure the findings and statements from the different disciplines into a coherent causal pattern. The two most plausible candidates for providing such a framework are the "capability-functioning" approach pioneered by A. Sen and M. Nussbaum on one hand, and the less recent "Need-satisfier" approach, on the other hand. The two approaches have their strengths and weaknesses. Both suffer (or do they ?) from the same indeterminateness concerning the items to include in a list of functionings or needs to take into account in building operational indicators. The capability-functioning approach is more unified and more subtle than the need-satisfier one but is mainly known by economists and philosophers close to economics. It is probably more difficult to use in participatory settings, but we were able to use it in a focus group setting. The needs-satisfiers approach is not unified (there are many different interpretations of it) and less sophisticated than the capability-functioning one but is more widespread in the different disciplines concerned with human wellbeing and easier to use with citizens in participatory settings. The need-satisfier approach is also more directly sensitive to inescapable elements of the human condition such as infancy, illness, and aging because it acknowledges from start the fact that man is also, sometimes, a purely "needy" creature.The capability-functioning approach has proven to provide a rich and productive model for analyzing the subtleties of wellbeing. It has been summarized in the WellBeBe project with the "Wellbeing Triangle" figure which has driven the survey on wellbeing led in Flanders. On the other hand, the needs-satisfiers framework as conceptualized by Max-Neef has

proven to facilitate the co-construction of indicators by scholars and a sample of citizens.

The main conclusions of the surveys on valuation and satisfaction with capabilities and functionings are that it is meaningful to measure functionings and capabilities and to use capabilities as an alternative indicator for wellbeing (alternative, actually, to satisfaction with life). We compared subjective wellbeing measurement with capabilities measurement using data (gathered in 2009) that are representative for the Flemish population. We find that both concepts have some drivers in common (health, wealth, realizations and scope to develop). But, also we find many influencing factors with a diverging effect. For the sample of students, we discovered that there are some interesting differences between the explanation of life satisfaction and the explanation of the functioning levels that create that satisfaction. The tentative overall conclusion is that capabilities do not directly provide life satisfaction, but only indirectly when being realized (achieved) as real functionings. In summary, these results imply that the choice of the 'outcome variable' and so the structurere of the empirical model, in the context of a multi-dimensional wellbeing measurement, are important for the identification (and the importance) of 'drivers' of wellbeing.

The main conclusions of the participatory exercise of co-construction are that citizens are indeed ready and even willing to collaborate in building and discussing indicators of wellbeing. However, one must be ready to invest much time in the process, more than what we were capable to do. The needs-satisfiers framework and, in particular, Max-Neef's list of nine fundamental needs (to which a tenth, fairness or social justice; should be added) proved to really help people disclose their beliefs, values and questioning and engage in productive deliberation. We discovered that adopting a needs-satisfiers perspective leads to distinguish two different kinds of indicators: indicators of the importance of a need (or of its problematic nature) and indicators of its level of satisfaction. In assessing the evolution of wellbeing, both types should be used. Moreover, because when working with whole classes of satisfiers or with what Max-Neef calls synergetic satisfiers, such as work and employment, the family and friendships networks, the living environment, etc., it proves useful to distinguish clearly from the outset between satisfaction IN the satisfier domain from satisfaction THROUGH the domain. For instance, satisfying one's need of identity through one's job is different from satisfying the same need IN the workplace. The same holds for protection, understanding, etc. It appeared also that when ranking needs by importance for wellbeing, it is actually not so much importance as such that is ranked than their problematic character in the current context.

Contribution to sustainable development

So far, wellbeing and prosperity have been defined and pursued as if there were no limit to the resources we could extract from nature nor to the capacity of the environment to absorb the waste and pollutions generated by this hitherto unended quest for more material growth and wealth. Sustainable development asks for letting the people who still need economic growth to continue (or start, for some) developing their economies and for inducing those rich enough to stop benefiting of economic growth to define and foster a new kind of prosperity, a prosperity without growth (Jackson 2010) or at least with “better” growth. This makes necessary and urgent to re-think wellbeing, notably by de-linking it as far as possible from production and consumption growth. In some way, sustainable development can be defined as a process of maximizing the productivity in generating wellbeing of every ton of material and energy extracted by men, or, put the other way around, in minimizing the input in environmental resources of every unit of human wellbeing. This asks for fair and accurate measures both of environmental pressure and of human wellbeing. The Wellbebe project aims at contributing to the latter and, by so doing to the sustainable development program. Furthermore, it is heavily involved in the ongoing process of re-conceptualizing sustainable development in terms of wellbeing, capabilities, needs and life chances (Rauschmayer, Omann and Frühmann 2010).

Keywords: Capability, functionings, needs, satisfiers, Q-methodology, focus groups, valuation, citizens’ panel, participatory methods.

1. INTRODUCTION

1.1. Context

Assessing sustainable development consists of evaluating two different, but linked, dimensions of social arrangements: development and sustainability. Briefly, sustainability refers to the amount and productive potential of resources left to future generations. It is widely acknowledged now that if the production and consumption patterns of affluent societies have brought about an unprecedented level of material welfare, their requirements in terms of environmental resources and functions are such that they could not be extended to the whole earth population or to the future generations.

What about development? Until recently, is has been largely assimilated to economic growth as measured by the GDP indicator. However, the comparison between indicators of economic performance (GDP/capita) and other more specialized indicators of wellbeing such as the Genuine Progress Indicator, the Fordham Institute index of social health – whatever their shortcomings – shows that, almost since the years 1973, more economic growth has ceased to be synonymous of more wellbeing for all. As long as GDP's growth correlated almost perfectly with improvement in wellbeing, there was no call for other measures of the effectiveness of our production and consumption patterns in bringing about wellbeing and happiness. Today, because the historical marriage of relatively generic economic growth, a certain respect of global environmental limits and achievements in generating some improved societal wellbeing is broken, the definition of alternative wellbeing indicators becomes indispensable.
Indeed, since the publication of the Brundtland report in 1987 and still more since the Conference on Environment and Development in 1991 in Rio, the indicators industry has been intensely busy in trying to overcome (or bypass) the GDP's limitations with respect to both sustainability and wellbeing. In the international and European policy context, the discussion of alternative indicators has been particularly vivid in the recent past. Most noted by international and national media, and thus policy makers, has been the presentation and publication of the 'Stiglitz-report' in September 2009. Indeed the presentation of the report on the "Measurement of Economic Performance and Social Progress" elaborated during an 18 months' period by a commission chaired by J. Stiglitz, A. Sen and J-P. Fitoussi (www.stiglitz-sen-fitoussi.fr) and commissioned by the French presidential authorities, has to be considered as a milestone in bringing to the mainstream – with

the help of the credibility of the commission's members – the long-lasting critical voices and messages on current indicators of wellbeing.

Because of the Stiglitz-Sen-Fitoussi Commission contending itself to stay within a mostly disciplinary economic reading and interpretation, parallel initiatives emerged which more profoundly ask for a redeployment of our measures of wellbeing and welfare. Most notably, a second French initiative, the FAIR-network (Forum pour d'Autres Indicateurs de Richesses) helped to raise its members' voices in French media on shortcomings linked to the procedural setting and the content of the Stiglitz-Sen-Fitoussi Commission itself, and used the political momentum to ask for more innovative approaches to the measurement of progress (notably on the process to select indicators, or components of indicators).September 2009 saw also the presentation of the European Commission's policy paper on "GDP and beyond: measuring progress in a changing world" (www.beyond-gdp.eu) which developed the European roadmap to the renewal of our measurements of wellbeing. In October 2009, the OECD's "3rd Worldforum on Statistics, Knowledge and Policy" held in Busan (Korea) raised identical messages as the Stiglitz-report for the ears of a large audience of international, transnational and national authorities (www.oecdworldforum2009.org). Simultaneously, but more locally, in Belgium, the Federal Planning Bureau's Task force Sustainable Development (www.plan.be) published in September 2009 its Federal Report on Sustainable Development entirely dedicated to the construction of an indicator framework and set, pursuing their objective to complement mono-sided perspective on (sustainable) development provided by GDP. Finally, at regional level, the Walloon Institute for statistics, evaluation and future studies (IWEPS- statistiques.wallonie.be) organized a discussion seminar in December 2009 dedicated to the Stiglitz report, on top of which a Belgian antenna network of FAIR was initiated (Réseau FAIR Wallonie-Bruxelles). Since then, it has started an important program of defining and measuring wellbeing at the local level in a fully participatory way, with the methodological assistance of the Council of Europe.

Briefly, the attempts to overcome the limitations of the classical statistical apparatus with respect to both sustainability and wellbeing have taken two different roads:

The first one, which could be dubbed "extended accounting" (Offer 2006) consists in building a better GDP, a GDP cleared of what should not be included in (defensive expenditures, environmental and social externalities, resources depletion…) and enriched with what should be in (non market goods and services, inequality,…) in order to account simultaneously for wellbeing (sometimes called progress, development, genuine wealth, etc.) and sustainability. The Index of Sustainable

Economic Welfare (ISEW), the Genuine Progress Indicator (GPI), the measure of Domestic Progress (MDP) and the Genuine Savings (GS) are the most accomplished illustrations of this approach, the fourth being somewhat different from the first three in that it attempts to measure changes in assets and capitals while the ISEW, the GPI and the MDP keep the basic flow-orientation of the GNP. Beyond this and other minor differences, they share two important characteristics: the valuation of all components in terms of monetary units and the mixing of development and sustainability elements in one single figure. Without denying the usefulness of improving the way we measure (and value) our economic activities (and maybe other activities as well), we think it is preferable to distinguish clearly what is of the order of the means or inputs (the economic activities, capitals, resources…), what is of the order of the aims, the objectives, i.e. well-being, quality of life, human flourishing or, in short, human development (outputs) and what is of the order of the conditions to respect (boundaries) while developing, i.e. sustainability, resource limitation, civil rights… . This calls for a non-monetary, autonomous index of well-being, On the other hand, as long as we identify well-being and material consumption or as long as we measure them with identical variables, we never know how much additional well-being brings one unit of additional material consumption and therefore what amount of resources can (and should) be saved for future generations without significant losses in welfare for current ones.

The second approach consists of firmly turning one's back to GDP both for assessing wellbeing and for evaluating sustainability. For sustainability, this has led to the emergence of new, original indicators of sustainability like the ecological footprint, Total Material Requirements, etc. On the wellbeing and development side also, new, partly or totally non-monetary indicators have been worked out, the most renown being the UNDP's HDI and its many satellites. Recently, the New Economic Foundation has proposed the "Happy Planet Index" as a mix of ecological footprint for sustainability and of a new, original indicator of wellbeing: life expectancy at birth times the mean level of subjective wellbeing, the product being interpreted as the prospect of happy years for the average person in the given country.

1.2. Objectives

The Wellbebe project aims at contributing to this common scientific and civic endeavor of building indicators of wellbeing in order to complement (or substitute to) GDP in assessing social progress and human development. As the title of the project makes clear, the requirement is to be both theoretically sound and democratically legitimate. By "theoretically sound" it is meant that wellbeing indicators should be justified on basis of rational theories of wellbeing and taking stock of the bulk of

empirical scientific knowledge available. However, when dealing with normative concepts, we cannot be satisfied with scientific validity only. It is important to resist the “technocratic” temptation of proposing indicators of people’s wellbeing only based on abstract theories of justice, wellbeing, health or economic development. A minimal requirement is at least to ask a sample of the population how they think about wellbeing and what language they use when talking about it. However, if we strive towards full-size “democratic legitimacy” we need to implement approaches which use the entire range of methods of enquiry from purely informative techniques (e.g. opinion polls) to consultative tools (e.g. focus groups) to deliberative and co-constructing approaches (e.g. citizen panels, deliberative workshops…).

More precisely, the objective of the project was to overcome the somewhat repetitive criticism of GDP as wellbeing indicator and to do creative work in proposing a workable alternative according to the aforementioned requirements. In addition, the alternative we were thinking about should be as multi-disciplinary as possible, integrating not only economic thinking but also what psychologists, sociologists, philosophers, physicians and anthropologists have to say about human development and wellbeing. In way, WellBeBe fully endorses the recommendations of the Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) known also as the Stiglitz-Sen Commission for building indicators of progress, namely to:

- Focus on people rather than on money or things. In other words, it should be fully human-centered;
- Account for the diversity and inequalities in human conditions. This means it should not look only at averages or means but pinpoint distributional aspects;
- Be multi-dimensional, quality of life depending on a multiplicity of factors with none of them claiming priority upon others.

In addition, we contend that a wellbeing index or scoreboard should help policy makers and the population design and assess public policies. Therefore, there should be a clear relation between the indicators and identified policy instruments and measures. For this reason, the use of the sole subjective wellbeing (coupled or not with the more objective but highly aggregated life expectancy) as indicator of wellbeing is insufficient.

Indeed, as Hagerty et al. (2001) show, in order to establish itself in the main public and policy arenas so as to be really effective (Boulanger 2007) an index should also meet some criteria of scientific soundness, usability and validity, namely:

- The index must have a clear practical purpose, i.e., a public policy purpose.

- The index should help policy makers develop and assess programs at all levels of aggregation.
- The index should be based on time series to allow periodic monitoring and control
- *The index should be grounded in well-established theory*. The authors insist on the fact that the indicators should allow their users (policy makers in this case) to understand how the indicator is constructed, so that they can predict how the value of the indicator will be modified by new programs. So the criterion is also linked with an external practical justification.
- *The components of the index should be reliable, valid and sensitive*. Here, 'sensitivity' means that the index should vary with policies inputs. At the same time, the index must be under internal criteria of validity and reliability, but should be designed to change in regard of external outputs.
- The index should be reported as a single number, but can be broken down into components.
- *The subdomains of the aggregate must encompass the totality of life experience*. This principle is actually submitted to statistical coherence: The different domains that compose the indicator must be statistically correlated with a global measure of wellbeing and account for a good portion of the variance. So the different domains must be shown to have an important contribution to the global value of the indicator.
- *Each domain must encompass a substantial but discrete portion of the wellbeing construct.* This is directly linked with the criterion above. Each domain must be separated, and overlaps between domains should be limited. Again, this can be statistically tested by measuring the shared variance between domains.
- *Each domain must have the potential to be measured in both objective and subjective dimensions.* According to the authors, we need both objective and subjective indicators because most of the time objective and subjective measures (general or by domains) do not superpose.
- Each domain within a generic wellbeing index must have relevance for most people.

Practically, translating these guidelines in working packages meant accomplishing the following tasks:

1. Exploring, assessing and synthesizing (through a workable framework) the main scientific discourses on wellbeing;
2. Exploring people's way of talking of wellbeing in general (through focus groups and Q-methodology),

3. Analyzing how people assess their own wellbeing (through surveys on capabilities, functionings and valuations),
4. Experimenting with participative processes of co-construction of indicators of wellbeing;
5. Ending with a decent, workable proposal of scoreboard and index.

The project started in 2007 and will end mid-2011. It is composed of two phases: phase 1 from 2007 to end 2008, phase 2 from 2009 to mid 2011.

Phase 1 has been devoted to tasks 1, 2 and partly 3; phase 2 to the remaining ones.

The actual course of the project has been subject to a series of adaptations from the original workplan:

- The Q-methodology survey wasn't initially planned but appeared to us as a profitable way to make use of the important material brought by the transcription of the focus groups discussion. It was also an opportunity to experiment with a methodology none of us mastered totally and which had, as far as we knew, never be used on the wellbeing theme. The aim was also to build some capacity in using a method almost unknown in Belgium.
- The initial proposal was to rely on large survey on a random sample of the whole Belgian population (i.e. in the three regions of the country) underpinned by the capability-functioning approach as overarching framework interpreted in a multi-disciplinary way. However, as the project evolved it became clearer and clearer that such a program would not allow us to reach all our objectives and meet our requirements. First of all, it was not demanding enough in terms of democratic legitimacy, a requirement not met either by the focus groups. In brief, a more deliberative method was to be experimented if one wanted to fully justify the aim of the project. On the other hand, the distance between the information provided by this kind of survey and the kind of data required by a workable index (i.e. as far as possible already collected, administrative statistics) was too large to passed through within the time limits. It was therefore decided not to put all our eggs in the same basket but to pursue two parallel tracks during the second phase: the capability-functioning survey but limited to Flanders and a participative exercise in the French speaking region leading to a proposal of possible index of wellbeing. However, it would not have been fair (nor productive) to enlist citizens in a purely academic exercise. Knowing that the recently installed Walloon government was eager to develop alternatives indicators of wellbeing and to foster participative methods in that context (and in general), we proposed to organize a citizens'

panel at the Walloon regional level on top of an explicit demand (and a complementary financial contribution of the Walloon region).

- Some changes have also been made in response to some criticisms by the evaluation committee of the mid-term evaluation process. For instance, more time and efforts have been devoted than was planned to the construction of a conceptual framework and in joining with others researchers' efforts in linking sustainable development with wellbeing analysis and measurement. This has given rise – amongst others- to two contributions from members of the WellBeBe team to the collective book directed by F. Rauschmeyer, I. Oman and F. Frühman: "Sustainable Development. Capabilities, needs, and wellbeing" (Routledge, 2010).
- It was planned initially to write a little book on the measurement of wellbeing targeted to a wide audience in the interval (about 3 – 4 months) during which a subcontractor was supposed to interview the 1.200 persons of the national sample. Whilst waiting for the data, the research team would have been more or less idle, were it not for that project. However, since we have abandoned the idea of the "big" survey commissioned to a subcontractor, there were no idle period anymore.
- Finally, we understood from some remarks made during our follow-up committee meetings that some potential users were impatient for practical, workable propositions of a wellbeing index and that we should hasten the process in direction of this kind of outcome, hence the citizens' panel and the needs-life domains matrix of indicators (see section 2.6) and another attempt to develop a synthetic index of wellbeing based on a demographic approach in terms of persons-days of basic capabilities.

We also want to stress that the project is not finished yet and that some activities are still work in progress. Furthermore, even after the end of the Wellbebe project as such, each team will continue to work on this thematic. The capability-functioning survey will be replicated at a two years interval, the needs-satisfiers matrix will be improved and discussed with statisticians and policy makers at the Walloon region level (notably under the FAIR umbrella), and the index based on persons-days of basic capabilities will be refined and submitted to discussion through publication in academic journals and international workshops.

2. METHODOLOGY AND RESULTS

2.1. Towards a integrative framework on wellbeing

By definition, an indicator is an observable variable - or a combination of observable variables - used to account for a non-observable reality, generally corresponding to an abstract concept such as: democracy, justice, freedom, wellbeing, etc. The objective of the indicator is to give an empirical expression of the concept, to operationalize it in a way as to be able to describe a social situation or a trend, to evaluate public policies and to set quantitative objectives for it. First and foremost, it involves knowing of which concept they are supposed to be the indicator. In other words, what does it measure exactly? Objective "things", subjective perceptions or reflexive evaluations? Social objects or individual characteristics? Processes or states? Building a potentially successful indicator of wellbeing is first of all a question of agreeing on the basic notions such as "wellbeing", "quality of life", "happiness", etc. However, a definition of the concept is insufficient. What we need is a full conception of it, meaning by this a definition of its main dimensions, the way it is structured, the principles that underlie it, etc. (the distinction between concept and conception is clearly stated by J. Rawls in the first pages of his "Theory of Justice").
Roughly, we can distinguish 5 frameworks or theories of wellbeing and quality-of-life:

- Wellbeing and happiness as utility maximization. This is the "welfarist" conception championed mostly by welfare economists and utilitarians philosophers which underlies the use of GDP as wellbeing indicator. For this reason, it has been left aside in our literature review.
- Wellbeing and happiness as adaptation (fitness) to the social environment. This is a biologically based, evolutionary perspective advocated mainly by anthropologists and some sociologists.
- Wellbeing as full health. This conception of wellbeing lies at the heart of the socio-medical (Pearlin 1989; Pearlin & al. 2005) socio-psychological (Aldwin 1994) and socio-epidemiological (Marmot 2005, Marmot and Wilkinson 2006) discourses.
- Wellbeing as needs-satisfaction. This theory has been developed mainly by psychologists in the Maslow tradition and underpins the currently burgeoning Self-Determination Theory and Psychological Wellbeing Theory. It is also very influential in the sustainable development community, thanks to Max-Neefs's (1991) theory of human development.
- Wellbeing as real freedom to live the life one values: the now very fashionable capability approach (CA) developed by A. Sen (1984, 1985,1999), M. Nussbaum (2003) and many others notably through the Human Development and Capability Association.

Note that we don't consider purely descriptive accounts of subjective wellbeing or happiness as 'theories' of wellbeing, As such, the description of SWB conceived as affective and/or as cognitive mental states makes no assumptions on the causes of these mental states. When explanations are looked for, they resort to one or a mix of the theories referred to above, with a preference for the needs-satisfaction model amongst psychologists and for the desire satisfaction model amongst mainstream economists.

The analysis of the literature relative to these approaches (except for the first one as explained) has been reported in three discussion papers (see Annexes):

- P.-M. Boulanger (2008). "The needs-satisfaction approach to wellbeing". IDD, Ottignies
- B. Defloor & L. Van Ootegem (2008). "Using 'functionings and capabilities' to assess individual wellbeing". HIVA-KUL, University College Ghent (Hogeschool Gent).
- P.-M. Boulanger (2008). "Substantive conceptions of wellbeing and quality of life: needs and stress theories". IDD, Ottignies.

The conceptual framework we are looking for aimed at accounting for individual wellbeing and happiness in a more comprehensive and realistic way than the traditional welfarist and utilitarian approaches, which consider only the individual's mental states (utility or happiness) or, still worse, only his consumption. Happiness (subjective wellbeing) and material welfare are but partial dimensions of existence and there is more in evaluating one person's life (be it by oneself or from an external perspective) than calculating the sum total of happiness or the level of wealth and income. As medicine, socio-epidemiology, positive psychology, anthropology and sound philosophy teach us, other dimensions, such as health, education, autonomy, self-esteem, are at least as important. We came to the conclusion that there are two general approaches to wellbeing that can account for this multi-dimensionality and complexity. The first, and oldest, is the "needs satisfaction" or "needs-satisfiers" approach, as advocated by scholars like Manfred Max-Neef (1991), Doyal and Gough (1991), Galtung (1976), etc., which fully acknowledge the importance of psychological (self-determination, relatedness, competence...) and social (social status, recognition, respect, participation) needs alongside the so-called basic (material) ones. The second, more recent, is the capability-functioning approach pioneered by Amartya Sen and further refined and developed by a host of researchers such as M. Nussbaum, S. Alkire, I. Robeyns, D. Crocker, etc.

2.1.1. THE NEEDS-SATISFIER APPROACH

There are many different version and interpretation of the needs-satisfier approach to wellbeing but they all more or less share the following assumptions:

- Wellbeing is conceived as the adequate satisfaction of needs.
- What allows the satisfaction of a need is called a satisfier for this need. For instance, food is a satisfier for the need of nutrition (or subsistence, at large).
- Satisfiers can be of very different kinds: commodities (hamburger for subsistence), institutions (courts for justice), relationships (sexual intercourse for reproduction, sex, affection), symbols (flag for identity), activities (hiking for health), etc.
- Needs are different from wants or desires. Contrary to wants, needs are objective because they can be assessed by external and impartial observers.
- Contrarily to wants, needs are urgent because not satisfying them is harmful for the physical or psychological health of the person. Of course, the more vital or basic a need, the more harm thwarting it is likely to lead to. More generally, basic needs are a) grave: the harm resulting from their non-fulfilment is very bad and may be irreversible; b) urgent: the harm will ensue rapidly; c) entrenched: they are determined by relatively unchangeable facts of nature; d) un-substitutable or weakly substitutable.
- Contrarily to wants, needs are satiable. This means that if a good or service can satisfy a given need (is therefore a “satisfier” for that need), there is a threshold level of consumption beyond which that good, or its characteristics, may bring no additional satisfaction to the consumer and can even, in some case, harm him.

Assessing wellbeing at a collective level in terms of some definite needs consists of evaluating how the social context contributes to undermining or, on the contrary, fostering the satisfaction of these needs for the population in general and for some subgroups (women, children disabled, aged…) in particular. For instance, with respect to three needs self-determination theory consider important for mental and psychological health - autonomy, competence and relatedness – it will be asked how far the social context is:

- autonomy supportive (versus controlling);
- effectance supportive (versus over-challenging, inconsistent or discouraging);
- relationally supportive (versus impersonal or rejective).

The needs-satisfiers approach (like the capability-functioning one, in that respect) is indeterminate as for the needs to take into account and the satisfiers (and the level of provision thereof) to consider adequate for their satisfaction. While some particular interpretation of the need-satisfier framework such as Doyal and Gough’s (1991) theory of human need or Max-Neef’s (1991) theory of human development, amongst

others, provide interesting suggestion for building list of needs to use in assessment operations, there is no silver bullet list that can be used in every circumstances and the building of such a list will always remain dependent of the specific context of the assessment.

2.1.2. THE CAPABILITY-FUNCTIONING APPROACH

The capabilities approach works at two levels: the level of observed outcomes (achieved functionings) and the level of opportunities and possibilities (capabilities). What an individual is really doing or being is called his or her achieved functionings. All possible functionings an individual can achieve are called his or her capabilities, representing the positive real freedom of an individual. The level and quality of the achieved functionings and capabilities depends on not only personal characteristics, but also on the features of the society one lives in. It "requires a more expensive bundle of goods and services in a society that is generally richer" (Sen, 1984). Alongside the doings and beings (i.e. the functionings) there is the valuation of these activities. Sen (1985) is very clear in saying that an individual's wellbeing should be evaluated based on what he manages to be doing or being. "I cannot emphasise adequately how important I believe it is to understand that the need for an explicit valuational exercise is an advantage, rather than a limitation of the capability approach" (Sen (2005a), footnote 10). Although individual valuation is to be preferred when wellbeing is about the kind of life one is living, valuation cannot be the only concern. It might be that we focus "exclusively on functionings for what they are" (Sen, 1987, p.108). Veenhoven (2000), Frey and Stutzer (2002), Layard (2005), Van Praag (2007) and others suggest to use happiness (or satisfaction with life) to evaluate wellbeing. Sen emphasizes that valuing a life is clearly different from the utility or the pleasure the individual is experiencing. "Valuing a life and measuring the happiness generated in that life are two different exercises" (Sen, 1985). If we agree that it can not be happiness nor satisfaction 'as such' that we are interested in, there are at least two ways in which the applied literature on happiness and capabilities can be reconciled. First, some of the factors creating happiness (be it capabilities or other influences that have nothing to do with capabilities) can be interesting for the valuation of wellbeing, for an ethical debate and for policy. Note that this does not allow us to overlook the fact that there might be legitimate capabilities which have no influence on life satisfaction or which are not sufficiently valuated. Second, when evaluating individual wellbeing, it is indeed important to know whether the individual experiences pleasure or happiness in his life. This means that the concrete functioning "being happy or satisfied with your life" will be one of the functionings that should be taken into account, together with many other doings or beings.

The capability-functioning approach assesses wellbeing along two axes: the axis of what people achieve in terms of beings and doings (functionings) they value and the axis of the set of the different vectors of beings and doings reachable and amongst which they were really free to choose. The paradigmatic example of the difference between functionings and capabilities and of the importance of choice, is the person who is undernourished because she lacks the resources allowing to command enough food (being adequately nourished is not part of her capability set) and the person who choose to fast for whatever reason. Furthermore, the capability approach emphasizes the fact that what matters for wellbeing is not the level of resources such as income for instance but what people achieve with them (their actual functionings) which depends on personal and social characteristics.
Figure 1 below synthesizes the capability-functioning framework including the mechanism of valuation and aspiration and adaptation.

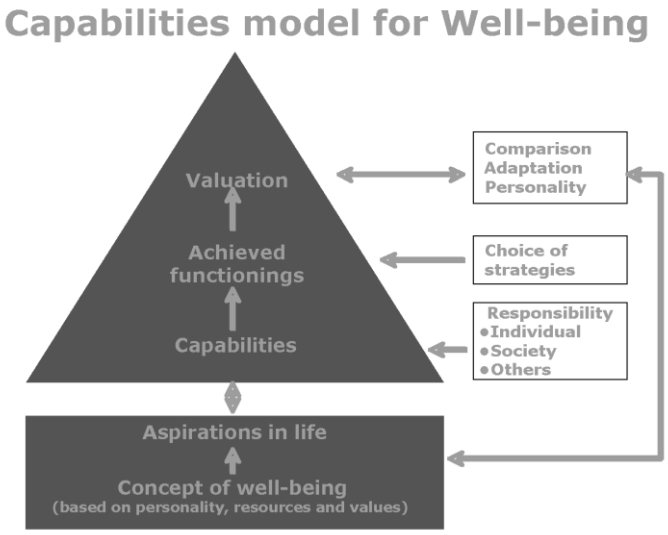


Figure 1 Capabilities model for wellbeing

Though there are deep similarities between the two frameworks, it can be argued that the former emphasizes more what all humans have in common as member of the same species while the latter emphasizes the singularity of each and every individual who, beyond his/her human nature has specific preferences, talents and capabilities which should be recognized in a well-ordered democratic society. On the other hand, they give a different interpretation to happiness (subjective wellbeing). In the Capability-Functioning theory, happiness is a functioning like other beings and doings that can be differently valued by different individuals. For the needs satisfaction approach, happiness is the manifestation of a state of overall need satisfaction, or more precisely, a state of mind brought by the awareness of a good-enough level of needs satisfaction. On the contrary, unhappiness is a state of mind associated with frustration, one or several needs being unsatisfactorily satisfied.

However, a state of happiness cannot be considered a reliable and sufficient indicator of wellbeing from a social justice and public policy perspective, for several reasons. The first one is that it is heavily influenced by genetic idiosyncratic factors. The second is that it depends on the level of aspiration of individual which can be unrealistic, either excessively high or desperately low compared to real social opportunities and personal resources, explaining why it can happen that objectively well-off people feel unsatisfied and objectively destitute can nevertheless report being happy. Finally, people adapt generally to their objective situation so that they end up reporting being reasonably happy even if living in very bad conditions.

2.1.3. A DYNAMICAL INTERPRETATION OF FUNCTIONINGS AND CAPABILITIES

While the logical distinction between capabilities and functionings is clear, the factual difference between them get blurred when one look at human life in a dynamical perspective. Indeed, when life is conceived as an achievement process, functionings can be valued not only for direct but also for indirect reasons, as Sen (1992: 39-40) stated:

"*Given her personal characteristics, social background, economic circumstances, etc., a person has the ability to do (or be) certain things that she has reason to value. The reason for valuation can be direct (the functioning involved may directly enrich her life, such as being well-nourished or being healthy), or indirect (the functioning involved may contribute to further production, or command a price in the market). The human capital perspective can – in principle – be defined very broadly to cover both types of valuation, but it is typically defined – by convention – primarily in terms of indirect value: human qualities that employed as 'capital' in production in the way physical capital is. In this sense, the narrower view of human capital approach fits into the more inclusive perspective of human capability which can cover both direct and indirect consequences of human abilities*."

If functionings, when indirectly valued, amount to capabilities, then some capabilities (mostly 'personal' capabilities) are functionings considered from the perspective of future 'more complex' or "higher" functionings. For instance, 'being adequately nourished' (once achieved) can be seen as a capability for whatever being or doing that is physically or intellectually demanding because it is a necessary condition for it; being literate is a capability for 'being a scientist', or a novelist, etc.

Implicit in this discussion of achieved functionings as capabilities, or of the dialectical nature of the relation between achievements and prospects, when achievements correspond to increases in assets which are productive in making higher or other functionings accessible, is that people conceive of themselves as much in terms of

achieved states than in terms of processes, of changes; as much in terms of 'being' as in terms of 'becoming' as Comim (2003) and D'Agate (2005) rightly observe. Man – at least the late, modern, western avatar of it – conceives of his life as a process, as the unfolding of a potential and likes to see himself as the main author or master of his destiny. In sum, he wants to be as far as possible ***responsible*** of his own achievement, and functionings or happiness are as much the development of preferences as their satisfaction.

- It follows from the above considerations that the valuation of achieved functionings is based on three criteria:
- The direct value of the functioning for wellbeing;
- The indirect value of the functioning as stepping stone (capability) for reaching new, more 'complex' functionings;

The process by which the functioning has been achieved;, that is, as the result of a free, autonomous personal action or as the outcome of the interplay of anonymous forces or even of the will of others.

2.1.4. CAPABILITIES AND LIFE CHANCES

Capabilities at the various ages in life are not distributed in a random way. They are always a mix of inherited and acquired characteristics. As the result of a life-cyclical process they depend, as we have seen, on achieved functionings and ultimately on the circumstances of birth. These circumstances (country, period, parents's wealth, social status and education level, etc.) shape, with varying strength and flexibility according to historical and socio-political parameters, individuals' initial capabilities and their probability of achieving socially valued functionings. In short, capabilities are socially structured, they are distributed according to social criteria. For instance, it are the circumstances of birth that account for the fact that a hairdresser in Calcutta and a hairdresser in Los Angeles, whilst performing similar activities and gestures in the accomplishment of their job, will reach very different level of income, leisure, health, life expectancy and so on. "Life chances" is the concept inherited from Max Weber to express what an individual is likely to achieve in life according to the circumstances of his birth and the influence they have on its further social status. More formally, one can define life chances as *the real opportunities (as distinguished from formal liberty and legal rights) for achieving valued functionings given one's society development level and one's position in its economic and cultural structure*.
As Dahrendorf noted (1979: 52-53), "Human societies and their history are about life chances, not about the greatest happiness of the greatest number, but about the greatest life chances of the greatest number. Life chances are (in principle) measurable possibilities to realize needs, wants and interests in, or at time, against a

given context. They are the substratum of social structures, in which life chances are therefore organized. They are also the motive force of social process, which are therefore about life chances."

The "life-course" perspective in health on which social epidemiology is based has shed much light on the process through which first the circumstances of birth then the various social experiences that follow, accumulate and channel life chances. Sociological and social epidemiological surveys and studies (Wilkinson 2006, Marmot 2005, Marmot & Wilkinson 2006) show very clearly that even in our so-called "meritocratic" societies, life chances, including probably the most crucial and valuable property of existence, its longevity in good health, depends dramatically on the social and family background of individuals, that is their "immutable" characteristics, circumstances of birth or, to use another formulation, the human, economical and social inherited capital at birth. Of course, social institutions such as the schooling and the health care systems can and does play a crucial role in limiting the influence of these background factors but they seldom eliminate it totally. Likewise, individuals, by their own efforts and actions can and sometimes do, overcome their initial disadvantage but most often it is at the expense of sacrifices and trade-offs more advantaged person never have to concede, as we will show below. However, the two 'Whitehall' studies, the longitudinal epidemiological surveys led by Marmot (Marmot et al. 1997, Marmot 2005) on British civil servants demonstrated that even amongst that relatively privileged social category, both mortality and morbidity varied according to the rank in the organisational hierarchy. In other words, each grade had higher levels of morbidity and mortality than the one above it and this was true for a wide range of causes of death, both those that might be influenced by medical care and those that may not. Having discarded, through multivariate statistical analysis all other possible explanations for such inequalities (genetic and familial background, differences in access to health care, unhealthy behaviours), Wilkinson (2006) concludes that the only remaining factors that can account for the social gradient in health are psycho-sociological ones, namely: social status, social affiliation and stress in early life.

2.1.5. TOWARDS AN INTEGRATED FRAMEWORK

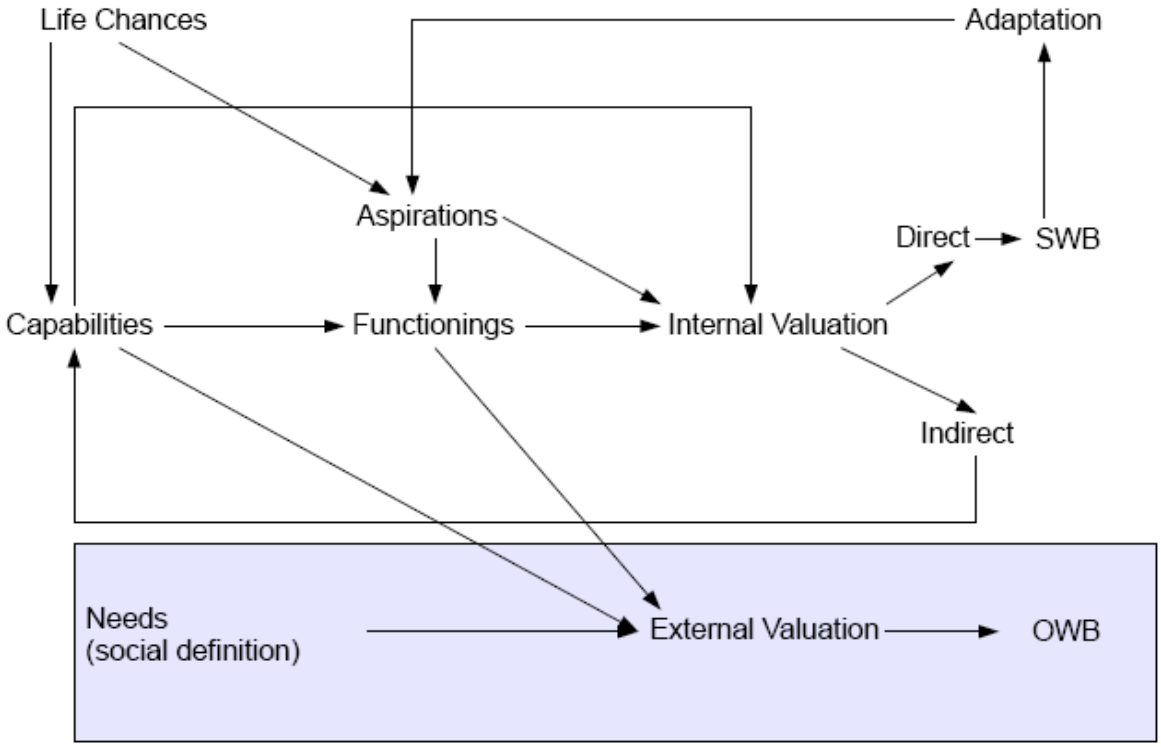


Figure 2. WellBeBe's framework for objective and subjective (reflective) wellbeing

Figure 2 synthesizes our vision of wellbeing, both subjective and objective. We consider true subjective wellbeing as the outcome of a reflective evaluation of one's achievements with respect to one's aspirations and capabilities. A negative outcome can lead to downsizing one's aspirations and perception of capability while a positive outcome can lead to the reverse: a more optimistic view of one's capabilities and rising aspirations.

We conceive of objective wellbeing (OWB) as an evaluation of a person's achieved functionings from an external perspective (for instance, a social worker or a legislator) or from a reflective internal one, taking into account her life chances (which can be conducive to a judgment of *responsibility*) on one hand, and a (socially determinate) conception of legitimate needs and of what constitute an adequate level of their satisfaction, on the other.

2.2. Exploring people's discourses on wellbeing

2.2.1. FOCUS GROUPS

2.2.1.1. Methodology

Usually, most of the research on quality of life, happiness and subjective wellbeing is based on closed-form questionnaires in which respondents don't have the opportunity to choose the domains or sectors on which their quality of life will be assessed. As Walker and Van der Maesen (2003:15) remark: "The simple direct method of asking members of the public what is most important in their lives has been used surprisingly little in this field". Still less used, as far as we know, are collective survey methods such as Focus Groups where people can express and discuss with peers their conception of the good life, happiness and welfare.

During the first phase of our project, next to the analysis and synthesis of the philosophical, sociological, economical and psychological literature (on happiness and wellbeing-related topics such as needs, stress, and functioning-capabilities, ...), eight Focus Groups were organized in order to investigate social representations and discourses about wellbeing. Besides their interest per se, the minutes of the Focus Groups' meetings also provided an important raw material on social and individual discourses that was further used for a more quantitative approach to subjectivity, i.e. the Q methodology .

Practically, we organized four French speaking and four Dutch speaking focus groups, each one of about 8 participants. The final composition of all focus groups (68 people in total) is as follows: French (34) / Flemish (34) - man (33) / woman (35) - age 18-36 (16) / 37-53 (24) / 54-79 (28) - degree less then (12) / equal to (23) / more than (33) higher secondary schooling. The high participation of elder and educated people and some specific characteristics of focus group participants (typically, focus group participants are rather extroverted) has an influence on our results. We do not pretend that the results as such are representative for the wellbeing of the Belgian population. Our objective was rather to collect as many diverse perceptions as possible and to investigate how a qualitative research method could contribute to wellbeing research.

During the first part of each focus session (one hour), the participants disclosed their views on wellbeing in general. They were asked to comment on the aspects of their lives having the most influence on their wellbeing. At the end, the participants had to classify the ex-ante list of aspects of wellbeing in order of importance. Afterwards, there was a debate on the reasons for these personal classifications. The second part of each session (one hour) consisted of an in depth discussion of one of the eight following (predefined) dimensions: work, living environment, physical and

psychological health, social environment, leisure-culture, education-information, wealth and income, and political environment.

As an introduction to this second part, the dimension chosen for each particular group was explained. The participants were asked to write the three most important sub-dimensions on a post-it, these were assembled on a wall and the most prominently mentioned sub-dimensions were discussed in detail. The animator explained in simple language what was asked for each sub-dimension: needs on the personal level, the possibilities (capabilities) to satisfy those needs and the achievements (functionings). The needs, possibilities and functionings of persons known by the participants were also accepted as valuable material. Participants were invited to describe their own situation as well as a realistic ideal situation. They had to indicate possible improvements, if it would be feasible to introduce them, and who could help to realize them.

As the aim was to detect the capabilities as the real possibilities to satisfy needs and to have a good life, much attention was given to the choices which are (or were) related to this. The resources needed or lacking to enable the satisfaction of needs and/or to have a real choice were asked for. A distinction has been made between individual or personal resources (and personal responsibility) and social resources and responsibilities (opportunities and provision of public goods and services).

The analysis of the focus groups has been based on transcripts of the tapes and on notes that are taken. The transcripts been analyzed using 'Weft', "an easy-to-use tool to assist in the analysis of textual data such as interview transcripts, written texts and notes" (see:http://www.pressure.to/qda/). This program allows the classification of the statements of the participants in different categories. In a first round all statements have been organized following the ex-ante list of eight dimensions. Then, a second reading was done of all the notes and transcripts by various researchers. The most frequently mentioned concepts (mentioned at least three times) were used to make new lists. This is called an ex-post listing for which 'Weft' was used again to classify all the statements of the participants. The ex-ante and ex-post listing were used to analyze the qualitative data.

2.2.1.2. Discussion

After the general discussion on (definitions and aspects of) wellbeing, all participants (individually) are asked to classify the eight ex-ante dimensions in order of importance for their own wellbeing (see item D of the framework in appendix). Afterwards, the reasons for the classification are discussed with the group. In fact, the obligation to classify is primarily meant to stimulate the focus discussion on the reasons for ranking. First we show the individual ranking results, then we comment on what can be learned about this ranking results after the group discussions.

Table I. The importance of wellbeing dimensions

Rank	Dimension	Mean Rank	p-value
1	Health	2.15	
2	Social Environment	3.54	.000
3	Wealth	3.65	.756
4	Work	3.93	.483
5	Physical Environment	4.70	.026
6	Leisure	5.40	.076
7	Education	5.68	.435
8	Political Life	6.94	.000

A Wilcoxon Signed Ranks Test shows that there is no statistically significant difference (at 5% level) between the mean rankings of the dimensions “social environment, wealth and work” on the one hand and “physical environment, leisure and education” on the other hand. “Health” is significantly the most important, “political life” the least.

The dimensions that get a higher ranking are mentioned more spontaneously in the discussions (first part of the focus groups). All participants agree that a good health is a basic capability and of vital importance for wellbeing. Health, work and wealth are considered inter-related by the participants because they determine the material possibilities for wellbeing. Without good health, it is impossible to have a (good) job and to earn (enough) money. Health and work are strongly related to social relationships. Wealth is more considered as a means, creating possibilities in the other dimensions. The most important immaterial aspect is clearly social relationships, always mentioned in an elaborated way, and also closely interrelated with other dimensions.

Dimensions with a lower ranking are discussed (or get more important in the discussion) only after they are introduced by the animator. When asked for, everybody agrees that democracy and political stability are basic conditions for wellbeing. But as we live in a democratic society this is taken for granted. Participants agree that political environment would be considered as more important in countries that do not guarantee fundamental rights, such as freedom of speech. Also, when living in a poor country, wealth would probably be seen as much more important. In the same spirit, the low ranking of education is related to the fact that the educational system in Belgium is perceived as good and accessible for all. This is something that is fundamental, but acquired. Leisure (for sports, culture and traveling) is rarely taken up spontaneously when talking about wellbeing. The same observation holds for environmental problems since this only has an indirect influence on personal wellbeing (via the effect on health). When the topic is

introduced by the moderator, the importance of the impact for future generations is recognized.

The clarification of the indexing due to the focus discussion confirms that much caution is necessary on the issue of ranking and valuing. A simple statistical weighting procedure of individual answers will not do. 'Valuation neglect' is clearly present when relying on individual opinions. The discussion of the reasons for the individual ranking wanted to bring a (partial) remedy of this neglect. In the discussion it appeared that the rankings were (not surprisingly) primarily motivated by the current situation of the respondents. Roughly: if someone have a problem in one of the dimensions (health, income,…) this dimension gains salience. The low position of the political dimension shows that daily life problems determine the ranking. For instance, the age of the person has much influence on the way the different dimensions are perceived. Aging, combined with the 'stage of life' one is in, makes people see things differently.

2.2.1.3. Conclusions on wellbeing

According to the focus group members, wellbeing is considered as some combination of a good quality of life with happiness. Quality of life depends on the satisfaction of needs and on the influence of externalities. Happiness is highly subjective, it is a momentary feeling or (a cause and result of) a way of living. The perceptions of needs or quality of life or happiness are strongly influenced by comparison, adaptation and personality or a 'state of mind'. These results confirm that an evaluation of wellbeing should go beyond an analysis of reported happiness but also that 'being happy' is indeed one of the functionings or capabilities to consider.

If we agree that it can not be happiness nor satisfaction 'as such' that we are interested in, there are at least two ways in which the applied literature on happiness and capabilities can be reconciled. First, some of the factors creating happiness (be it capabilities or other influences that have nothing to do with capabilities) can be interesting for the valuation of wellbeing, for an ethical debate and for policy. Note that this does not allow us to overlook the fact that there might be legitimate capabilities which have no influence on life satisfaction or which are not sufficiently valuated. The results of our indexing exercise (section 3) show that basic (or public good) capabilities will not get sufficient attention when we leave it up to an individual valuation. Second, when evaluating individual wellbeing, it is indeed important to know whether the individual experiences pleasure or happiness in his life. This means that the concrete functioning "being happy or satisfied with your life" will be one of the functionings that should be taken into account, together with many other doings or beings.

According to the perceptions of the participants, to achieve wellbeing (as a certain combination of quality of life and happiness) it is not sufficient to have the will and the state of mind. One also needs to have the possibilities to get there (capabilities).
Opportunities are mostly mentioned in relationship with education, work, leisure and health. Education is considered as fundamental for the ability to make choices. This view is not limited to traditional schooling. Parents have to bring up their children in such a way that they are able to adapt to society. Furthermore, permanent schooling is considered necessary to be able to function in a changing world. Quality of basic schooling in Belgium is perceived as high and enough affordable possibilities are offered. Nevertheless opportunities are lacking concerning training for adults. More should be done on this by the state as well as by private companies.
In the sphere of work, the possibility to have a pleasant and interesting job is related to the ability to freely choose a job (and to be able to quit and change if things are not working out). For the dimension leisure, money and time can provide more access to the things people like to do (often mentioned was traveling). Trade offs are clearly recognized: working more to get more income to spend on hobbies will result in less time to exercise them. Leisure has to adapt to the financial possibilities.
Capabilities come up in a very positive way when talking about health. A good health is a basic capability with respect to all other capabilities and functionings. Long-term sickness creates a lack of capabilities, high costs and low income and diminishes wellbeing. In general, the Belgian health care system is praised.
Needs and stress seem to come spontaneously also to our focus group participants' minds. What is interesting is the kind of need and the kind of stressor they refer to the more eagerly. For example, the need for recognition and autonomy are often mentioned as well as the stress induced by conflicts between professional and family roles. Of course, this cannot be taken as and evidence that the needs and stress language are the most accurate way to deal with wellbeing.

2.2.2. Q-METHODOLOGY

Q methodology was invented in 1935 by the physician and psychologist William Stephenson. Since then, it has been considerably enriched by the political scientist Steven Brown and has been the subject of many applications in political science, marketing, sociology, etc. Concretely, a *Q* sort consists in having a set of proposals (i.e. sentences, statements, pictures…) called the *Q* Sample, sorted by a small sample of subjects, the *P* sample. The subjects are asked to rank the propositions of the *Q* sample, usually from those with which they most disagree to those with which they most agree, taking care to reproduce an almost normal distribution. Once this sorting obtained, an analysis reveals the correlations between the different subjects'

sortings (i.e. similarities and differences in viewpoints), and a factor analysis reveals factors (i.e. “segments of subjectivity” (Brown 1980)) which are in common to the different sortings. Both analysis are combined and make it possible to reveal standard sortings of the proposals.

In summary, *Q* methodology’s task is to reveal the inherent structure of a concourse (i.e. whatever is expressed about any given topic); the vectors of thought (i.e. the discourses) that sustain it and which, in turn, are sustained by it.

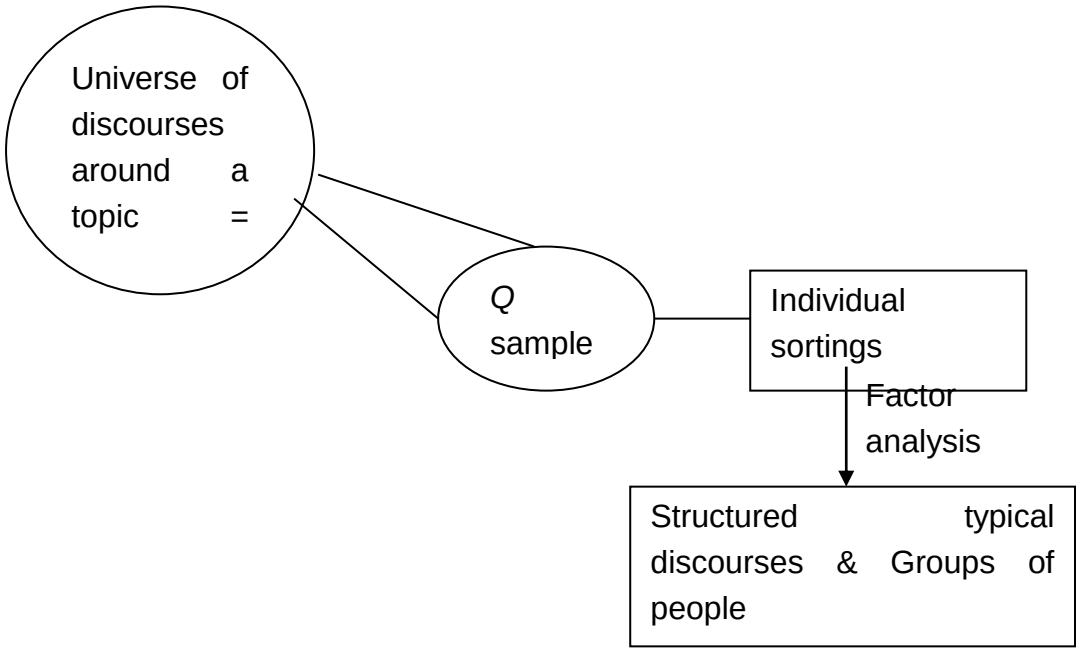


Figure 3. The Q-methodology Process

Since *Q* methodology is nothing more than “a basis for a science of subjectivity” (Brown 1980), and since subjective viewpoints can be expressed and communicated around any theme, *Q* can fit any topic that concerns tastes, preferences, sentiments, motives and goals. Yet, some of its characteristics make it particularly well suited for certain situations.

- A first characteristic of *Q* is that “questions pertaining to one and the same domain are not analysed in separate items of information but rather in their mutual coherence for the respondent.” (Van Exel 2005:3). According to Donner (2001), this makes it especially good for cases in which a single « issue » is made out of subdimensions, and in which it is not necessarily sure how all these subdimensions fit together.
- A second specificity of *Q* methodology is that it considers the subjects as self-referent, and thus allows them to define the discourses and categories themselves rather than having the researcher define them for analysis. Instead of hypothesizing relationships between items in advance and testing that structure, the researcher gleans the relationship between the items only

> once the sort has been complemented. (Swedeen 2005; Donner 2001; McKeown and Thomas 1988). The factors “obtained” are not “analytically distinct traits synthesized within the researcher’s frame of reference, but, rather, “operant representations of whole perspectives” (McKeown and Thomas 1988 : 24). The meaning doesn’t come “from outside”, but well from the way the different items are combined together. According to Swedeen (2005), what follows is that the researcher himself or herself can be considered as a subject by participating in a *Q* study, along with the respondents, and that there is thus not the structural power imbalance inherent in the subject/object duality of survey research. “*Q* methodology is therefore epistemologically consistent with the intent for researchers to contribute to high quality decision processes with fair outcomes […] and with the role of scientists as participants in public discussion.” (Swedeen 2005: 192).

In regard to all those elements, using *Q* methodology to explore discourses around “conceptions of wellbeing” is proved to be particularly accurate. Firstly because wellbeing is well a single « issue » made out of subdimensions, about which we would like to know how they fit together, how they are weighted and assessed by a sample of subjects (cf. supra). And, secondly, because it takes place within a project where the researchers intend to work *as* and *alongside* citizens in order to build democratically legitimate indicators.

2.2.2.1. Construction of the concourse

In *Q*, the flow of communicability surrounding any topic is referred to as a “concourse”, and it is from this concourse that a sample of statements is subsequently drawn for administration in a *Q* sort. In WellBeBe, the idea was first to make “ordinary” citizens debate and argue on what constitutes a “valuable life”, on the meaning of wellbeing, its dimensions and determinants and the ways to assess it. This debate was organized during the preceding Focus Groups (cf. supra), with the idea to compose the *Q* sample out of statements and proposals drawn from the minutes of those discussions. Those minutes can be considered as being our concourse. Nonetheless, since we were at the same time working on a theoretical and conceptual analysis, the scientific literature referred to can without any doubt be considered as being part of the concourse as well.

Once the concourse has been gathered, the task becomes one of selection, organization, and analysis, so as to draw a subset of statements, the *Q* sample (usually 20 to 60 items), which is eventually presented to participants in the form of a *Q* sort. The main goal of selecting a *Q* sample, is to provide “a miniature which, in major respects, contains the comprehensiveness of the larger process being

modelled" (Brown 1980), i.e. a set that is representative of the wide range of existing opinions about the topic. Usually, a structure (called "design principle") is used in order to avoid the under- or over-sampling of certain components, and, consequently, the incorporation of a bias into the final *Q* sample. In WellBeBe, the design emerged from a first rough analysis of the Focus Groups' minutes. It was presented under the form of a 4X5 matrix. The categories in lines (Having- Being- Doing- Interacting) were the "existential categories" that were borrowed from the Max Neef's classification of human needs (1991), whilst the categories in columns were a kind of summary of the eight dimensions discussed during the Focus Groups (work, physical environment, physical and psychological health, social environment, leisure-culture, education-information, income-wealth, and political environment), to which we added a column referring to general definitions of wellbeing and happiness, in order to take into account statements about the relations between the different dimensions.

2.2.2.2. Participants selection (P sample)

A *Q* methodological study needs only a limited number of respondents, since "(...) all that is required are enough subjects to establish the existence of a factor for purposes of comparing one factor with another […]." (Brown 1980: 192). What really matters is not the number of respondents, nor the statistical representativeness of the sample: the results of a *Q* methodological study are the distinct subjectivities about a topic that are operant, not the percentage of the sample (or the general population) that adheres to any of them. The important thing is thus to select people who are theoretically relevant to the problem under consideration. Therefore, as in the theoretical structuring of a set of *Q* statements, experimental design principles can be drawn upon for purpose of composing a *P* set that is thus more theoretical or dimensional than random or accidental.

In WellBeBe, since the concourse topic, i.e. wellbeing, concerned every human being, we didn't need the participants to hold specific characteristics. Nonetheless, the *Q* methodology was intended to be a first step towards the design of a subsequent survey on a larger sample, as well as for the consequent construction of the future index. Therefore, we found interesting to see, later, in the analysis, whether the different subjective structures of the evaluation of wellbeing (i.e. the factor scores) were related or not to discriminating socio-demographic characteristics such as age, gender and educational level. We thus chose those three characteristics, together with the speech community (since the *Q* sorting would be conducted in both Flemish and French languages) in order to design the *P* sample.

Ideally, our *P* sample could thus have been composed according to a factorial design corresponding to the 2 Belgian linguistic communities, 2 genders, 3 age groups and

3 education levels, what would have defined a combinatorial space of 36 possibilities. Each possibility could have been replicated 3 times, what would have given us a sample of 108 persons. Our first idea was to call back the participants of the Focus Groups, to select some of them according to the design, and to ask them to complete the *Q* sorting. Nonetheless, for practical feasibility (especially financial) reasons, this was made impossible. Therefore, we opted for a less formal solution. The way we proceeded in order to "recruit" our participants was the following: each member of the team sent an invitation by email to a selection of contacts, taking care to choose people as different as possible in terms of age, education, but also of presumed ways of living and thinking. Those contacts were also enjoined to forward the invitation to five of their own contacts, the most different from them they could find.

Finally, our P-sample was composed of 169 participants distributed as follows:

Linguistic group :

- 96 French speaking (57%)
- 73 Flemish speaking (43%)

Sex

- 91 women (54%)
- 78 men (46%)

Age :

- 69 aged between 16 and 29 years old (41%)
- 65 aged between 30 and 49 years old (39%)
- 33 aged between 50 and 64 years old (19%)
- 2 aged 65 and beyond (1%)

Educational level (highest degree obtained):

- 1 primary school (0,5%)
- 2 inferior secundary school (1%)
- 17 superior secundary school (9%)
- 52 high school (30%)
- 97 university (58%)

2.2.2.3. Execution of Q sort

The execution of the *Q* sort by the participants was made possible and easy thanks to a free software, FlashQ, a user friendly Flash application for performing *Q* sorts online, developed by Christian Hackert and Gernot Braehler (2007)[1]. Before

[1] http://www.hackert.biz/flashq/

executing the “real” *Q* sorts, we first organized two tests. The debriefing of those two tests helped us to refine the instructions, to make them as clear as possible for the future participants, and thus to make sure they would do the exercise in the best conditions possible, even if alone in front of their computer. This done, the application was made accessible (in French and in Flemish) through the website of WellBeBe, and the sortings started.

In a first step, the participants were asked to read carefully all the statements and to split them up into three piles: a pile for statements they tended to disagree with, a pile for those they tended to agree with, and, in the middle, a pile for those about which they were either neutral, ambivalent, or uncertain.

In a second step, they were asked to take the cards from the "agree"-pile, to read them again and, in conformity with the distribution, to select the three statements they most agreed with and to drag and drop them on the “score scale”, below the "+5" header. They did the same for the statements they most disagreed with, under the “-5” header. Next, they selected those they second most agreed/disagreed with and placed them under "+4"/"-4"… They followed this procedure, back and forth, for all cards alternatively in the "agree"- and "disagree"-pile. Finally, reading the "neutral"-cards again, they arranged them in the remaining open boxes of the score sheet.

Table II. Q study sorting scheme

Statement rank	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
Number of statements	3	4	5	6	8	10	8	6	5	4	3

In a next step, they were asked to explain why they agreed most or disagreed most with the statements they had placed in the "+5" and "-5" columns.

And finally, they were enjoined to answer certain questions regarding their demographic characteristics: sex, age, educational level, activity, socio-professional category, marital status, whether they were in a relationship or not, whether they were owner of their house or not, number of children… elements that we thought could be of an interest for us during the analysis phase.

2.2.2.4. Statistical analysis

The statistical analysis was made thanks to “PQmethod”, a free statistical program designed by Peter Schmolck[2] to fit specifically the requirements of *Q* studies. First, correlations among *Q* Sorts were computed, which were then factor-analysed, with the objective to identify a number of significant natural groupings of *Q* sorts, each one shared by groups of people with similar points of view. This set of factors was then submitted to a varimax rotation and eventually, three relevant factors were selected (cf. infra). We looked for rotation solutions in order to uncover a more satisfying structure in the sorting than the one resulting from the first components analysis. We had no *a priori* knowledge that could help arriving at a meaningful judgmental rotation and, moreover, the number of sortings made their graphical representation too cluttered to be of some real help. After many explorations and manipulations, we decided to keep a varimax rotation with three factors solution as the one which provided the most economical and easiest to interpret structure. Eventually, the three factors identified enabled us to classify 83% of our P sample. After rotation, they accounted respectively for 13%, 11% and 16% of the variance, hence for 40% of total variation with 35 sortings allocated to the first one, 37 to the second and 67 to the third. Here are the main characteristics of the three emerging factors.

What characterizes Factor 1 is:

- The importance of work not mainly for the income but for the meaning it gives to life and being valued
- The importance of being active including physically and in leisure, travelling and discovering new cultures, having control and dealing with one’s problems, setting oneself goals and guiding principles, having autonomy in one’s job The emphasis is on being pro-active, not just adapted to society They are ready to take some risks and don’t need so much to feel secure.
- The necessity of collective action for making a better world notably by participating in associations and doing voluntary work and the importance of democracy They also believe that one cannot be happy while alone. They give more importance to social relations than to material needs.
- Factor 1 people have less need than others for idleness and relaxation to which they grant a moderate importance. They don’t like to live on a day to day base.
- Factor 1 people don’t want to be too dependent on familial relations, notably with their partner. They don’t think having children and caring for them gives

[2] see http://www.lrz-muenchen.de/~schmolck/qmethod/)

meaning to life and if their relations with their family matter, they stand between Factor 2 and Factor 3 in that respect. Inversely, they need more than others to be surrounded by their friends.

What characterizes Factor 2 is:

- The importance of nature and the environment.
- The importance of enjoying oneself in work but the denial of working as an important component of the good life either as giving meaning to it, as a source of relationships or of social status.
- The rejection of material values and struggling for a living standard and the value given to health, idleness and taking the time.
- Factor 2 people don't need others in order to feel well, they are the only ones who believe one can be happy while living alone and they need less than others to be surrounded by their friends. They are also the ones who give the less importance to family relations.
- Contrary to Factor 1 and Factor 3 people, they don't really need to feel respected by others or to do something for others. Indeed, they fiercely refuse to make their wellbeing depend on a comparison with other people or on adaptation to society and subscribing to its values system.
- They slightly reject the idea that one cannot feel well if one doesn't feel secure in one's neighborhood and think important not to be afraid of tomorrow; something in which social security has a role to play.

What characterizes Factor 3 is:

- The importance given to family and children and to having a right balance between work and domestic life. On the other hand, the evocation of a possible positive link between wellbeing and relations with pets provoke a strong rebuttal.
- The recognition of the role of money and material satisfactions in wellbeing, contrary to the two first factors that minimize the importance of material conditions of life. This is attested by rankings given to statements concerning money. In fact, factor 3 is the only one that gives a positive score to the proposition "Money, financial means are important." Also, contrary to others, they aren't ready to sacrifice income for enjoyment in jobs even if they would not stop working if wealthy enough.
- Nature and the environment seem to play a minor role in factor 3's conception of wellbeing.
- There is a mild but undeniable valorization of comfort, facility and a rejection of values of performance and excellence and of taking risks.

- Security as reality and as feeling is important, be it financial brought by social security, or by being the owner of one's shelter or physical, in one's living environment.
- There is no particular need for active leisure nor for travelling, discovering new people, etc.

TABLE III shows the main differences between the three factors, ranked by decreasing importance in the difference of their Z-score value.

Table III. The main differences between the three factors

	Fact 1 vs. Fact 2	Fact1. vs Fact 3	Fact2 vs. Fact 3
1	2. If I could afford it, I wouldn't work anymore. (-5 <> +1)	44. Money, financial means are important. Without those, you can't do anything. (-2 <> +2)	57. You can be happy while being alone. (+4 <> -4)
2	57. You can be happy while being alone. (-3 <> +4)	7. Wellbeing is inherent to having political decision. (0 <> -4)	36. It's not working that gives sense to my life. (+4 <> -2)
3	36. It's not working that gives sense to my life. (+2 <> +4)	4. Wellbeing means not having to struggle to have one's vital needs satisfied. (0 <> +4)	2. If I could afford it, I wouldn't work anymore. (1 <> -4)
4	39. You feel good when you have time, when you can do things relaxed, when you don't have to rush all the time. (+2 <> +5)	56. It's important not to be afraid of tomorrow, to feel secure for the future. (-1 <> +3)	13. What matters for me is the relationships with children, parents, family. (0 <> +5)
5	4. Wellbeing means not having to struggle to have one's vital needs satisfied. (0 <> +3)	27. What I am looking for is a job that I enjoy, even if it doesn't pay so well. (+3 <> 0)	46. To feel well, you have to be adapted to society, to have adopted its values. (-5 <> -1)
6	62. Religion and spiritual life contribute to my wellbeing. (-1 <> -4)	43. Travelling, discovering new cultures, new people, being provided with a change of	24. I am ready to take risks, to make changes, in order to do what I really like.

		scene, all that is important for your wellbeing. (+4 <> 0)	(-4 <> 0)
7	61. I need to feel surrounded by my friends to be happy. (+5 <> +1)	15. Having children and caring for them gives meaning to your life. (0 <> +4)	5. What my job brings to my wellbeing is the fact of being recognised, valued. (-1 <> +2)
8	58. I can't feel well if I am not continuously excelling myself, if I don't try always to do better. (-1 <> -3)	42. I feel well when I am with my pet. (-1 <> -5)	15. Having children and caring for them gives meaning to your life. (0 <> +4)
9	16. Environment is more and more deteriorating: air pollution, noise... My wellbeing is harmed by all that. (0 <> +3)	46. To feel well, you have to be adapted to society, to have adopted its values. (-4 <> -1)	51. I need to feel respected by the others. (0 <> +4)
10	55. Voluntary work and taking part in an association contribute to my wellbeing.(+1 <> -1)	24. I am ready to take risks, to make changes, in order to do what I really like. (+3 <> 0)	47. It is not essential to have bought the place you live in, to be the owner of it. (0 <> -2)

In short, the statements which differ most between the three factors are:

- “It is important to have a good knowledge of oneself, etc.”: factors 1 and 3 score respectively 5 and 3 on this, but factor 2 scores -3.
- “You can be happy even if alone” on which factors 1 and 3 strongly disagree (-3 and -4) while factor 2 agrees (+4).
- “If I could afford it, I wouldn’t work anymore”. Here again, factors 1 and 3 disagree (-5 and -4) but factor 2 agrees moderately (+1).
- “It is not working that gives meaning to my life” (36) scores -2 on factors 1 and 3 but 4 on factor 2.

To summarize, we would say Factor 1 shows an active conception of wellbeing. It scores high on almost every sentence that we classified in the “DOING” category of our factorial design. It scores also high on the “INTERACTING-SOCIETY” dimension, but not on the others “INTERACTING” dimensions, except for friends. On the other hand, it clearly gives less importance to the HAVING and BEING components of wellbeing.

Factor 2 conception of wellbeing gives less importance to working and acting and more to feeling, relaxing, etc. It is also a surprising combination of individualism by rejection of integration in one's own society and inner circle of relation (family, friends, and colleagues) and of communautarism with respect to the external world, others and the environment. Thus, it can be considered an illustration of the BEING and INTERACTING – ENV.GLOBAL dimensions at the expense of HAVING, on the one hand and HOME and WORK on the other.

Finally, Factor 3 summarizes a conception of wellbeing giving more importance to comfort and material conditions brought by working and social security and enabling to fully enjoy family relations. It favours a quiet and secure life without being forced to struggle, take risk and outperform. Cleary, the HAVING and INTERACTION-HOME and SOCIETY dimensions hold sway at the expense of the DOING and INTERACTION-WORK and ENV-GLOBAL ones.
Thus, contrary to what we thought beforehand, INTERACTING is a different axiological dimension than the HAVING, BEING and DOING ones. While different conceptions of the good life can be categorized according to the degree to which they privilege the having, the doing or the being dimensions, none of them can dispense with the interacting one. The issue, therefore, is not interacting rather than being, doing or having, but instead what kind of interaction is favoured, and what context of interaction matters most: the inner circle of family and relatives, the larger circle of work and social relations or the outer circle of humanity and the "creation" in the biblical sense?
Let us see now how what socio-demographic characteristics are associated with these conceptions of wellbeing.

2.2.2.5. Distribution of the population between the three factors

Table IV. distribution of the population between the three factors

	NO	Factor 1	Factor 2	Factor3	TOTAL
French Speaking	19 (0,63) (19,79)	29 (0,83) (30,21)	27 (0,73) (28,13)	21 (0,31) (21,88)	96
Dutch Speaking	11 (0,37) (15,07)	6 (0,17) (8,22)	10 (0,17) (13,70)	46 (0,69) (63,01)	73
TOTAL	30	35	37	67	169

The first socio-demographic characteristics to analyse are linguistic community and gender as they are constituting the largest subgroups. As explained above, the *Q* Sortings have been executed in parallel in the two principal languages of Belgium,

Dutch and French. As the percentages in italic show, there is a clear linguistic distribution of the *Q* Sortings on the different factors. The majority of French speaking respondents are located mainly and equally on factors 2 and 3 with about 20% of them either on factor 3 or un-identifiable. The situation is much more contracted with Dutch speaking respondents. They clearly dismiss factor 1 conception to which only 6 of them (8%) are allocated. On the contrary, 63% load on factor 3, leaving 15% un-allocated and almost 14% endorsing factor 2.
There is no clear pattern of distribution according to gender as was the case with linguistic community. The only distinguishable characteristic concerns factors 1 and 2. Women are two times more likely to be classified on factor 1 than on factor 2 while the reverse is true for men. Contrary to what is still taken for granted by many, women are not more likely than men to identify with a conception of wellbeing – the factor 3 one- that privileges family relations and rising children. It is even the contrary. However, it is necessary to check if this observation is robust when controlling for linguistic community membership.

It seems that factor 1 conception is above all a young people vision and that as time goes by, they slide progressively either to factor 2 or to a factor 3 conception. Indeed, if one looks at the 50-64 age group, one observes a clear hierarchy with factor 3 winning factor 2 itself winning factor 1. It is also interesting to remark that it is the age group in which there is the smallest proportion of un-identified sortings. When controlling by linguistic group, things are clearer. In the Dutch speaking group of 50-64 years old, there is nobody left unallocated and 73 % are located on factor 3. On the contrary, in the corresponding French speaking group, 44% are located on factor 2, 28 on factor 3 and 11 are left aside. On the other hand, the observation concerning the progressive sliding toward factor 3 with aging is confirmed for both linguistic groups but at steadily higher levels in the Dutch speaking group where proportions climb from 60,5% amongst young to 100% (but this is certainly non significant) amongst oldest with 58% (for 30-49 ones) and 73% (for 50-64) as intermediary values.

2.2.2.6. Conclusions

Our concourse topic, i.e. wellbeing, was a very broad and general subject, whilst the use of *Q* methodology is generally made easier when it is to investigate more restrained topics around which a debate already exists, with specific groups of people presumed to hold specific points of view. Here, we didn't have any clue about what could lead people to hold one or another conception of wellbeing. The only characteristics we could refer to were the socio-demographic characteristics, which finally took a greater importance than usual in *Q* researches. Indeed, one of the

objectives for us was to measure whether the different subjective structures of the evaluation of wellbeing could be related to discriminating socio-demographic elements, an information that would be crucial for the design of a subsequent survey on a larger sample, as well as for the consequent construction of an index. Indeed, despite the rather homogeneous composition of our p-sample (characterized by an important under-representation of aged and of weakly educated people), we are facing interesting and significant differences in conceptions of wellbeing. These can be summarized as follows:

From the *Q* Sorts collected in the two Belgian linguistic groups, three dominant conceptions of wellbeing seem to emerge. However these three conceptions explain only 40% of the overall variance and the number of eigenvalues greater than one indicates that many others particular conceptions could be identified. However, the three factors identified here enable us to classify 83% of our sample.

The three different conceptions of wellbeing can be distinguished by the relative importance they attach to the “having”, “doing” and “being” dimensions of existence and their privileged sector of interactions (i.e. with the close circle of relatives and/or friends, the larger circle of one’s society, or the still larger one of global environment and foreign cultures).

The only characteristic that clearly “explains” the distribution of loadings on one or another of the three factors in our otherwise rather homogeneous sample is linguistic community membership. There are undeniable differences in the distribution of the Dutch speaking and the French speaking groups on the three identified factors. This difference is robust when controlling for age, education, gender, etc.

2.3. Applying the capability-functioning framework: the wellbeing triangle

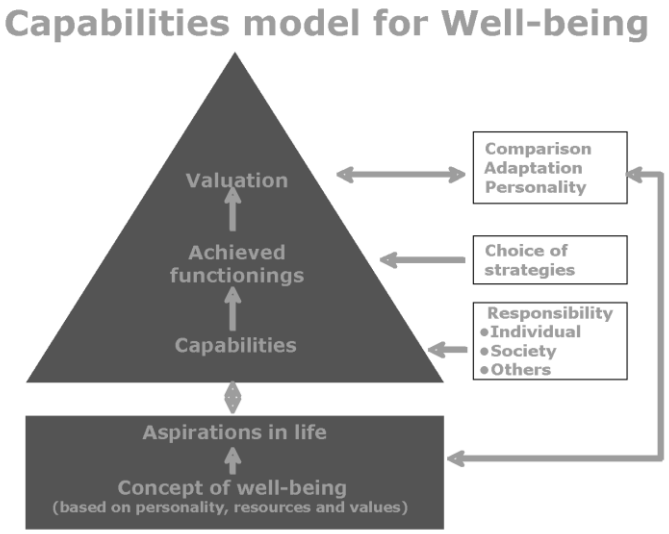
In what follows, we present first the wellbeing triangle model that defines wellbeing as a multi-dimensional concept, going from capabilities to life satisfaction. Secondly, we present two surveys that were developed and tested to operationalize the triangle. Thirdly, we digress on results concerning wellbeing and its determinants, for a population of students (first survey) as well as for a sample that is representative for the Flemish population according to age, gender and life situation (second survey).

2.3.1. THE WELLBEING TRIANGLE MODEL

The (applied) literature on wellbeing is very diverse, depending on the theoretical framework, the disciplinary background, the available data, the relevancy for policy, etc… The intention here is to sketch a framework that allows to integrate many of the different strands in the discussion. We do not want to provide an overview of (any part of) the literature as such, but want to use the framework to underpin an exploratory questionnaire (section 2.5.2) as well as the basic structure of an explanatory model (section 2.5.3). First, we present the conceptual idea of the wellbeing triangle. Then we motivate how the triangle served as the basis for the development of a questionnaire that was tested with a population of students (first survey).

The capabilities framework was never intended to be a ready made tool for the measurement of wellbeing as such. Rather it provides a consistent framework for discussion and research on wellbeing. This claim can be supported by the 'wellbeing triangle' as presented in figure 1.

At the basic level, a vector of individual capabilities is (although difficult to observe empirically) indispensable for the possibility to develop a qualitative life. Each individual, as well as the society as a whole, has some responsibility for the creation, provision, safeguarding, etc…of a capabilities vector as rich as possible (Fleurbaey, 2008; Schokkaert, 2009). Some capabilities are scarce, be it at the level of an individual or at the level of the society as a whole. There are different interpretations of the capabilities framework that stem from the different disciplines in which the application is made. Welfare economics is interested in the context of scarcity of the capabilities vector. The transformation of capabilities into a vector of achieved functionings is the result of a (sometimes preference-based) choice that ultimately reflects the relative valuation of the individual over the alternative options that are possible. So at the second level, the vector of observed or achieved functioning is revealing what the person is actually "doing and being". Both levels (of capabilities as well as of functionings) raise the challenging question of how to weight and thus value the sometimes very different functionings or capabilities. Using reported 'satisfaction with life' is one solution for this difficult valuation exercise (Schokkaert, 2009). This will be the starting point when the triangle is used to motivate an empirical modelling structure (section 1.3).



The use of the triangle starts off with the construction of an operational framework that supports a questionnaire which consistently makes the distinction between functionings (B) and capabilities (Q) on the one hand and the distinction between the subjective measurement (S) and the valuation (V) of these functionings and capabilities on the other hand. Moreover, we compare between an objective (O) and a subjective (S) measurement of functionings and capabilities.

For the objective measurement of capabilities, we include questions in order to explore the possibilities of the measurement of autonomy as an objective capability indicator (Alkire, 2008). We ask for the reason why certain activities are (not) performed, is it done “at the insistence of others or pressed by the circumstances / or to find favour in someone's eyes / or because you think it is important / or because it is fully in keeping with your belief and it fits your own principles and values”?

A special attempt is undertaken for the measurement of “refined functionings” (VRF). Sen, and also Schokkaert (2009) and Fleurbaey (2006), argue in favour of the construction of “refined functionings” as a way to incorporate considerations of freedom (choice) and responsibility in the wellbeing evaluation as such. In the refinement, the different options at an individual’s disposal are taken into account. From the point of view of the triangle, this means that the individual is asked to make an integrated assessment of his situation, in fact taking into account all the levels of the triangle at once. In the pragmatic interpretation we use here, looking at “refined functionings” in fact asks for the construction of “smart questions” about wellbeing. When asking questions about the valuation of a certain functioning level, the respondent should be pointed to the alternative choices that could be made, or could not be made.

These different theoretical and conceptual angles result in a questionnaire that has four alternative versions, the structure of which is summarized in TABLE V. Pre-testing demonstrated that respondents could absorb only two batteries of S- or V-questions. All four versions contain the questions on objective measurement (OQ- and OB-questions) and the question: “How satisfied are you with your life as a whole? Give for yourself a score from 1 to 10, where 1 indicates very unsatisfied and 10 very satisfied”.

Table V. An operational framework for a questionnaire on Capabilities and Functionings

Level /Measurement	Objective O	Subjective S	Valuation V	Subjective S	Valuation V
Capabilities Q	OQ	SQ	VQ	SQ	
Achieved Functionings B	OB	SB	VB		VB
Refined Functionings VRF				VRF(SB)	VRF(VB)
Questionnaire-version	All versions	Version1	Version2	Version3	Version4

The first two versions depend on the choice between capabilities (Q) or functionings (B) and between subjective measurement (S) or valuation (V). Both versions serve to address our first challenge: is there (for the respondents) a genuine difference between the subjective measurement and the valuation of a functioning or a capability? Even more, is it possible to differentiate between functionings and capabilities as such? Questionnaire version 3 and 4 operationalize the special attention we want to give to the concept of refined functionings (VRF). The motivation behind version 3 and 4 is that both ways of questioning refined functionings (either making use of SB or making use of VB) were too similar to include in one version. As for the first two versions, we combined the VRF-questions with a second battery of questions (arbitrarily chosen), once with functionings and once with capabilities.

Inspired by Anand & Van Hees (2006), we use seven life domains. They have one question for every life domain. We have sometimes several questions, primarily to be as concrete as possible. Depending on the kind of life domain and specific question, and also depending on the conceptual nature of the question (S, V, VRF, B or Q), the effective realisation in the different versions of the questionnaire can be different. TABLE VI summarizes the (structure of the) questionnaire in relation to the life domains and the concepts that are examined. The consistency in the questionings, applied to the example in the first life domain (“happy life”) is illustrated underneath.

Table VI. Life domains and the structure of the questionnaire

Life domain	Realisation in the questionnaire	SQ	SB	VQ	VB	VRF/SB	VRF/VB
1 happy life	1 lead a happy life	x	x	x	x	x	x
2 achievement of dreams and goals	2 reach dreams and goals in life		x		x	x	x
	2a reach dreams in life	x		x			
	2b reach goals in life	x		x			
3 healthy life	3 have a healthy life					x	
	3a be in good health	x	x	x	x		x
	3b do sports	x	x	x	x		x
	3c eat healthy food	x	x	x	x		x
4 education, information and culture	4 acquire knowledge					x	
	4a have education and training	x	x	x	x		x
	4b keep abreast of current events	x	x	x	x		x
	4c participate in cultural events	x	x	x	x		x
5 social life	5 have a satisfying social life	x	x	x	x	x	x
6 environment	6 live in pleasant environments	x	x	x	x	x	x
7 personal integrity	7 act according to personal integrity	x	x	x	x	x	x
	8 in general	x		x			

Example for the life domain “happy life”:
SQ: How are the possibilities for you … to seek happiness in your life
SB: Generally, I lead a happy life
VQ: I am satisfied with the possibilities…to seek happiness in my life
VB: I am satisfied with … the extent of happiness in my life
VRF/SB: Given the possibilities to seek happiness in my life, my life is happy
VRF/VB: Given the possibilities to seek happiness in my life, I am satisfied with the amount of happiness in my life

Each questionnaire starts with the question on general satisfaction. Afterwards the students (all versions) were questioned about their level of different functionings and capabilities (OB and OQ). Then every version has its two specific batteries of questions as explained in TABLE V. Except for the SQ-question (ranging from

completely unsatisfactory to excellent) all other questions ask for complete disagreement to complete agreement, on a scale from 1 to 7. The questionnaire ends with a succession of socio-economic variables.

As it is argued in Schokkaert (2009), using satisfaction with life as dependent variable in a structural model, is a promising way to integrate the literature on happiness or life satisfaction with that on capabilities. This illuminates how the 'wellbeing triangle' can be used to underpin structural empirical modeling. Reported 'satisfaction with life', interpreted as the result of an individual valuation of 'the life as a whole', implies that one starts off from the top of the triangle. This general valuation of the life one leads can help to understand the different functionings that are actually chosen.

Application of the complete 'wellbeing triangle' asks for a modelling structure that explains the reported life satisfaction making use of functionings, capabilities and the socio-economic characteristics of the respondents. This model is possible thanks to the first version of the questionnaire, the results will be reported in section three. The logical first shrinkage of the triangle consists of the elimination of the valuational aspect. The challenge is then in the understanding of each of the reported functioning levels, making use of the information on the capabilities that are available and on the personal characteristics. This will be the second kind of modeling that is exercised for each of the life domains and their respective realizations. At the bottom level of the triangle, there is the need for the understanding of the reported capability levels for each of the life domains, making use of the personal and socio-economic information at the individual level.

2.3.2. DATA-GATHERING MAKING USE OF A SURVEY INSTRUMENT: METHODOLOGY AND MOTIVATION

First, we present and explain the pilot survey conducted with a population (N=483) of 18 year old fist year Bachelor students in applied economics and business studies. Secondly, we present a general survey as it was used to investigate 'wellbeing in Flanders' at a more generalized level.

2.3.2.1. A pilot survey with students

As explained above, the idea of the "wellbeing triangle" is that individual wellbeing has "something to do with" with (the combination of) an individual his capabilities (opportunities, options, choices,…), his functionings (doings and beings, life situations,…) and with the way he feels about his situation (happiness, pleasure,

satisfaction…). Capabilities are largely unobservable, functioning and satisfaction levels are.

So there are two distinct questions. For the 'capabilities', the issue is how to operationalise the concept (how to make questions that measure capabilities)? After this, and also for the level of the functionings, the issue is then how to do the weighting (indexing, aggregation). If we do not assume "dominance" of one dimension (ie. not assuming that one life dimensions is more important than another one, and this for every one) we have to weight different dimensions. If we do not want to be "paternalistic or perfect" (ie the researcher decides on the weights to use), we need some kind of "participatory or democratic or respectful" weighting procedure (ie the individual decides on the weights to use). One (revealed preference) way to do this second kind of weighting is by relying on individual subjective wellbeing information that can be asked for in a survey.

In summary, direct measurement of capabilities and/or functionings is scarce. Problems arise concerning the observability of capabilities and there is the challenge of the valuation of the functionings and/or capabilities. Pioneering research and results can be found in the (what we consider as being) relevant literature in Anand & Van Hees (2006) and Anand et al (2008). These results are 'replicated', but applied to a pilot sample of first year bachelor students.

For the questions on functionings/capabilities and happiness, the pilot studies (with students) enable us to improve the questions on these items. We adapted the questionnaire of Anand & van Hees (2006) and consistently make the distinction between functionings and capabilities on the one hand, and between the measurement and valuation of these functionings and capabilities on the other hand. The guinea pigs were a population (N=483) of 18 year old fist year Bachelor students in applied economics and business studies.

With respect to the happiness questions, we did two pilot studies to test the results of the focus groups (see part one of the Wellbebe-project) concerning the determinants of happiness[3]. As an attempt to eliminate biases (comparison, adaptation), we experimented with alternative happiness questions. We asked for three different satisfaction scores (on a scale from 1 to 10):

- non-comparative without reference point (traditional satisfaction question)
- with an external reference point: saying that the average World citizen has a score of 5/10

[3] We used a sample (N=1530) representative according to age and gender for the Flemish population between 18 and 80 years old and a sample (N=608) also representative according to educational degree. The different satisfaction questions will be taken up in the student pilot survey, as well in the more generalized survey.

- with an internal reference point: Anamnestic Comparative Self Assessment (ACSA) where 1 indicated the worst situation and 10 the best situation ever experienced in life.

Results of the student pilot survey will be presented under the heading of “primary results” (section three). Here we only elaborate on that kind of results that we used to (motivate and) make the move to a (more) representative survey.
Most of the lessons we learned from the pilot with students had to do with the specificity of the sample (18 year old bachelor students):

- the concrete wording of questions
- the relevance of the life domains (very relevant or not) for the population
- the lack of heterogeneity of the sample

So, our subsequent research should/could do the same type of pilot exercises, but with other samples: people who are working or not, with sensitivity for age differences,… Together with the interesting empirical results as such (see paragraph three), this made us make the move to a survey representative for a larger population (the Flemish population) and for more sub-groups (students, pensioners, working class people, unemployed,…).

2.3.2.2. A survey about wellbeing in Flanders (LEVO 2009)

For the quantitative study there are mainly two approaches possible, a representative sample, or a sample that is build making use of relevant sub-samples. The first option is a questioning of a representative sample of the Belgian population about different dimensions (functioning levels, capabilities when this is possible). The weighting of the different dimensions would allow to analyse the relative importance (and the rate of substitution) of the different dimension for the wellbeing of an ‘average Belgian’. But what is the relevance of this representative sample? In this case, each respondent would have (to give) a weight for each dimension. So, each respondent gets a survey question on the dimension work (about his functioning level and weighting) irrespective whether he is working or not or maybe he has never worked before. A similar problem arises concerning most of the functionings, a respondent will have to give certain weight for the dimension education while he is maybe still studying or maybe already retired… So, the relevance of the life dimension depends to some extent on the specific situation of the respondent. Moreover, it is very difficult (impossible) to design a general questionnaire with questions (that are operationalisations of functionings) that fit for all possible life situations. Furthermore, taking ex-post one sub-set of this representative sample

would result in too low numbers for many subsamples (eg part-time workers, retired people…) and questions that are not specifically tailored to their situation.
For those reasons, we have chosen for an approach that allows (1) to make specific questions for specific sub-samples of the population (depending on the life situation of the group) and (2) to have sub-samples that are large enough to get meaningful results. In the student pilot survey we used a specific sample (first year bachelor students) that facilitates the design of concrete and relevant (related to the life situation) questions about functionings and capabilities. In this more generalized version, we have questioned different sub-samples such that we can construct an indicator of wellbeing (weighting scheme of dimensions) for every group separately. The advantage of this approach is that we allow different measurements and weights for the dimensions taking into account the specific (life) situation. When taking sub-samples which are large enough we can do this in a reliable way.
Afterwards, we are able to weight the different sub-samples (according to their importance in the population in general) to obtain an 'average' (representative) wellbeing.

The field work and part of the coding is done by Master students (at the university college Gent). In the months October and November 2009, the survey is conducted. There are 1680 respondents representing groups (life – situations) as follows:

- Students (258)
- Part-time workers (259)
- Full-time workers (315)
- Pensioners (254)
- Unemployed (282)
- Househusband/wife (203)
- Not working (not capable to work) (109)

In section three, we elaborate on the composition and socio-economic characteristics of the sample, as well as on the weighting system that can be used to make the sample representative according to life situation, gender and age.

The elaborated (and tested) questionnaire consists of:

- a wide range of socio-economic characteristics and personality variables
- questions on the allocation of time of the respondents
- questions on functionings and capabilities for different life domains
- question on the relative importance of different dimensions
- questions on satisfaction with life and contribution to this satisfaction of different life domains
- several versions of happiness/satisfaction questions

- specific questions depending on the situation (sub-sample specific)
- …

In the remainder of this section, we provide more details on the socio-economic characteristics and personality traits that are collected.

Socio-economic characteristics:

- age, gender, nationality
- educational degree and educational degree of father and mother
- having a relationship (of what kind) or not
- subjective health perception and number of doctor visits
- personal income, additional resources, owner of house or not and perception of family wealth
- perception of scope for personal development

Personality traits:

- introvert-extravert
- selfish-altruistic
- conscientious
- dutiful
- emotionally concerned
- creative attitude
- optimism and
- self-confidence

Expectations:

- extend to which expectations of 5 years ago are realized
- realism of expectations
- disappointment when friends or family do not meet my expectations
- disappointment when I do not meet the expectations of friends or family

Time allocation: hours spent on average during a normal week on different activities (work or search for work, mobility, housekeeping, children, education/training, stay informed on recent news, sports, club life, family visits, going out, watch TV, internet, other activities)

Additional characteristics for specific groups:

- Employed: type of position, sector of employment, type of contract, reasons for part-time or full-time, family-work balance, days of sick leave, motivation to work

- Students: stay on and pay for student room, getting a scholarship, student's job, relational position of the parents, chance to pass
- Pensioners: actual and desired retirement age, number of grandchildren
- Non-employed: duration and reason of non-employment, idea about personal future, feelings on being non-employed, type of past work experience.
- Unemployed: frequency of applications, expectation about moment of finding work, past job opportunity (and reason for not accepting it), requirements about future job content

2.3.3. SURVEY RESULTS

The results with the sample of students revealed results that are meaningfully interpretable and confirm that it is possible to design questions that measure functionings and capabilities[4]. Here, first, we present the student sample and the estimation of a system of structural equations showing that the socio-economic characteristics have an influence on capabilities, that capabilities influence functionings and that functionings influence life satisfaction. This will be interpreted as an application of the wellbeing triangle as presented in section one. Secondly, we present the data that are generated with the more general survey and we give some indicators of wellbeing of the Flemish population and concentrate on the influencing factors.

The wellbeing triangle applied to the survey with students

First, we give a brief description of the sample of students and we comment on the objective measurement of functionings and capabilities. Then, we construct and estimate explanatory models based on what we conceive as the "wellbeing triangle" (see section one).

The population we use for our exploratory research are first year Bachelor students in business economics at the University College Ghent. To test the different questions and measurement methods, four different versions of the questionnaire are developed (cfr. TABLE V). Each version is tested with a different sample (four times about 120 students). In total, 483 students participated[5]. We use a systematic

[4] In 2011, the results will be published in the journal Social Indicators Research (paper in appendix, after revision). In this paper, we propose to use capabilities as an alternative indicator for well-being (alternative to satisfaction with life).

[5] N=122 (V1), 122 (V2), 119 (V3), 120 (V4).

sampling procedure: Every fourth students obtains the same version such that we have four identical samples.

To compare the results of the different versions of the questionnaire, it is needed that each sample is as such representative for the population of first year Bachelor students. We compared the distribution of all OB- and OQ-variables and all socio-economic characteristics for the four versions. The chi-square test (for categorical variables) and one-way-ANOVA (for continuous variables) confirmed that each sample is as such representative. This makes that we can compare the answers on the S-, V- and RF-questions for these four groups. Here, we amplify on the socio-economic variables.

In the questionnaire several socio-economic characteristics are included. Here we present those that are used in the explanatory models in the next sub-section. We include personal characteristics (sex, relational position, number of siblings), indicators of social background (educational level mother, situation parents, parental home, strictness of parents) and variables related to student life (accommodated in student's apartment, having a job while student, pay for studies). By including some variables related to secondary education (hours of maths and final score in third stage secondary education) and a dummy for a previous (non-) successful attempt in higher education we proxy capacity. The answer on the question 'I think I have ….% chance to pass this school year' combines capacity and self-confidence.

To control for subjectivity we opted to include several personality traits and also a question referring to the mood of the day. Including personality traits in cross-sectional satisfaction research was also one of the suggestions of Anand et al (2009). For personality we include five traits related to the "Big Five", a consensus in psychology on a general taxonomy of personality traits. "These dimensions do not represent a particular theoretical perspective but were derived from analyses of the natural-language terms people use to describe themselves" (John & Srivastava, 1999). Goldberg (1990) demonstrated the generality of this 5-factor model.

TABLE VII gives an overview of the socio-economic characteristics. When the variable is included as a dummy variable in the models we present the fraction of the reference category, for the other (ordinal[6] or continuous) variables we present the mean.

[6] In order to reduce the number of independent variables, ordinal variables were included as continuous variables in the models.

Table VII. Socio-economic characteristics of the population

	proportion	mean
woman	0,427	
not single (having a relation, whether or not living together)	0,470	
living in student's apartment	0,415	
pay (partly) for studies	0,089	
number of siblings		1,509
hours of mathematics in third stage secondary education		4,168
final score in third stage secondary education (from 1'less then 50%' and 2 '50%-60%' to 6 '90%-100%')		3,347
intensive study behaviour during secondary education (study much and hard or regularly)	0,409	
no job while being a student	0,285	
mother bachelor or master degree	0,573	
parents divorced (or newly composed family)	0,170	
parental home rented	0,075	
a previous successful attempt to higher education	0,010	
a previous non-successful attempt to higher education	0,139	
chance to pass		57,262
strictness parents (from 1 'very loose' to 7 'very strict')		3,863
extraversion (from 1 'introverted, do not like to be prominent' to 7 'extraverted, like to be prominent')		4,109
altruism (from 1 'selfish' to 7' altruistic')		4,272
less punctual (from 1' very punctual and conscientious' to 7 'little punctual and little self-discipline')		3,780
emotionally concerned (from 1' emotionally unconcerned (little worried)' to 7 'emotionally concerned (easily angry or anxious)')		4,386
creativity (from 1 'practical attitude' to 7 'creative attitude')		3,797
mood (smiley's scale from 1 'crying' to 5 'very happy')		3,802

One of the objectives of the research is the construction and estimation of explanatory models based on what we conceive as the "wellbeing triangle". Taking stock of the theoretical and applied literature on wellbeing, happiness or satisfaction with life, capabilities, quality of life, needs and basic needs… one can evaluate individual wellbeing at three distinct levels: considering the possibilities or opportunities one has in life (capabilities), addressing the actual life situation (functionings) or taking account of the life satisfaction as enjoyed (and reported) by the individual. In reality, wellbeing will be some combination of this 'wellbeing

triangle'. In applied wellbeing research, empirical modeling should consider the relative importance of the distinct levels. Anand & Van Hees (2006) explain capabilities and functionings while Anand et al (2009) particularly investigate the co-variation between life satisfaction and capabilities. Our questionnaire data allow to use the full "wellbeing triangle" and to integrate capabilities as well as functionings in an empirical modeling exercise explaining life satisfaction. We examine the co-variation first, between life satisfaction and functionings and capabilities, and secondly, between functionings and capabilities. Each time, the usual socio-economic and personal characteristics supplement the range of explanatory variables. We use OLS to model general satisfaction and ordered logit for the functionings and capabilities models. The data of version 1 of the questionnaire are used.

a) Modeling general life satisfaction

The survey starts with questioning how satisfied one is with his life as a whole (score from 1 'very unsatisfied' to 10 'very satisfied'). In traditional models explaining happiness or satisfaction with life, several socio-economic characteristics are seen as determinants (for an overview see Dolan et al, 2006). In the model in TABLE VIII we include only socio-economic characteristics. 'Not being single' has a significant positive effect on general satisfaction. When the 'parental home is rented', this has a negative effect. Thinking to have a higher 'chance to pass this school year' makes one feel more satisfied. Of the big-five personality traits two are significant: 'extraversion' (positive) and 'emotionally concerned' (negative). Being in a better 'mood' the day of answering the survey also increases the reported satisfaction level.

Table VIII. General satisfaction= f(socio-economic characteristics)

general satisfaction	Coef	Std. Err	P>|t|
woman	0,019	0,105	0,857
not single	0,367	0,092	0,000
living in student's apartment	-0,124	0,096	0,200
pay (partly) for studies	-0,112	0,169	0,509
number of siblings	0,036	0,044	0,415
hours math in third stage secondary education	-0,045	0,034	0,179
final score in third stage secondary education	0,014	0,079	0,856
less intensive study behaviour during secondary	0,164	0,108	0,129
no job while being a student	0,130	0,101	0,199
mother bachelor or master degree	0,112	0,093	0,231

parents divorced	-0,210	0,127	0,099
parental home rented	-0,394	0,181	0,030
strictness parents	-0,064	0,039	0,102
a previous successful attempt to higher education	0,032	0,480	0,947
a previous non-successful attempt to higher education	-0,246	0,140	0,080
chance to pass	0,010	0,003	0,004
extraversion	0,180	0,036	0,000
altruistic	-0,017	0,039	0,666
less punctual	-0,022	0,036	0,543
emotionally concerned	-0,072	0,031	0,021
creative attitude	-0,017	0,034	0,618
mood	0,232	0,058	0,000
_cons	6,681	0,591	0,000
Number of observations	432		
F(19, 417)	5,76		
Prob > F	0,000		
Adj R-squared	0,196		

The triangle structure of the capabilities approach (figure 1) suggests that general satisfaction is explained by functionings and capabilities. The model presented in TABLE IX estimates general satisfaction using functionings and capabilities. The adjusted R-square is much higher than in the previous model (0.61>0.2), indicating that more of the variance in general satisfaction is explained in this model. The results show that some functionings have a significant effect on life satisfaction: ‘leading a happy life’, ‘doing sports’, ‘having education in line with capacity’ and ‘participate in cultural events’. Remarkably, not a single capability indicator is significant. Anand et al (2009) estimate the effect of capabilities (and not functionings) on general satisfaction and obtain several significant capabilities.

Table IX. General satisfaction= f(capabilities, functionings)

general satisfaction	Coef	Std. Err	P>|t|
SQ 1 lead a happy life	0,101	0,124	0,419
SQ 2a reach dreams in life	-0,021	0,091	0,818
SQ 2b reach goals in life	0,062	0,119	0,603
SQ 3a be in good health	0,077	0,094	0,414
SQ 3b do sports	-0,093	0,091	0,309

SQ 3c eat healthy food	0,089	0,079	0,260
SQ 4a have education and training in line with capacity	0,023	0,115	0,842
SQ 4b keep abreast of current events	-0,129	0,102	0,208
SQ 4c participate in cultural events	0,048	0,059	0,422
SQ 5 have a satisfying social life	0,073	0,129	0,572
SQ 6 live in pleasant environments	0,163	0,118	0,172
SQ 7 act according to personal integrity	-0,098	0,128	0,447
SB 1 lead a happy life	0,565	0,123	0,000
SB 2 reach dreams and goals in life	0,129	0,088	0,147
SB 3a be in good health	0,021	0,094	0,826
SB 3b do sports	0,183	0,059	0,002
SB 3c eat healthy food	-0,024	0,079	0,757
SB 4a have education in line with capacity	-0,251	0,081	0,002
SB 4b keep abreast of current events	0,024	0,071	0,732
SB 4c participate in cultural events	0,116	0,055	0,038
SB 5 have a satisfying social life	0,114	0,112	0,314
SB 6 live in pleasant environments	-0,184	0,110	0,099
SB 7 act according to personal integrity	-0,046	0,109	0,674
_cons	2,926	0,826	0,001
Number of observations	117		
F(23, 93)	8,880		
Prob > F	0,000		
Adj R-squared	0,610		

Note: when life domain 1 (lead a happy life) is not included in the model, the explaining power remains higher than in model 1 (Adj R-squared: 0.45). In such a model the same domains are significant, and life domains 2 en 5 also become significant.

In TABLE X we combine the results of both previous models and estimate general satisfaction using functionings and the significant (at 10%) characteristics of the model of TABLE VIII. Only one socio-economic variable, the ‘chance to pass’, remains significant in this combination. In Anand et al (2009), extraversion and being emotionally stable are significant for general satisfaction. In our models, this is only the case in the model without functionings and capabilities (as in TABLE VIII).

The functioning related to the life domain ‘leading a happy life’ has the strongest positive impact on general satisfaction. When leaving out this life domain from the model, also ‘reaching dreams and goals’, ‘doing sports’ and ‘having a satisfying social life’ become significant, as well as ‘not being single’ (adjusted R-squared is then 0.489). When looking at TABLE X at a 10% significance level also ‘reaching dreams and goals in life’, ‘doing sports’, ‘participating in cultural events’ and ‘having a satisfying social life’ have a positive impact on general satisfaction, together with a negative impact of having ‘parents that are not married or are living together’.

One functioning attracts our special attention: the more first year students think they have ‘an education in line with their capacity’ the less they are satisfied with life as a whole. When studying ‘in line with capacity’ is interpreted by the respondents as having to work intensively, the negative effect of higher scores on this item is understandable, since these students will have less time left to spent on more pleasant activities. In this interpretation, students who think they study ‘below their capacity’, work less intensively and have more time to increase their life satisfaction. An alternative explanation is that those who have a lower score on this functioning have chosen to study business administration and public management despite their capacity to do other things and are thus more satisfied because they study according to their first choice and are not restricted by their capacity.

In summary, we find that general life satisfaction of our respondents is significantly influenced by the achieved functionings and not by the socio-economic characteristics or the general personality traits. The specificity of the population makes that variables such as the ‘chance to pass this school year’ and ‘education in line with capacity’ become important. This result also mitigates the doubts that often arise when using satisfaction data (and subjective data in general drawn from subjective reports). If the results are primarily driven by the subjectivity of the respondents, variables such as the personality traits and mood should play a more prominent role in the satisfaction models that are discussed here.

Table X. Estimation results for general satisfaction explained by functionings and socio-economic characteristics.

general satisfaction	Coef	Std. Err	P>|t|
SB 1 lead a happy life	0,554	0,090	0,000
SB 2 reach dreams and goals in life	0,157	0,090	0,086
SB 3a be in good health	-0,019	0,082	0,816
SB 3b do sports	0,095	0,049	0,054
SB 3c eat healthy food	-0,017	0,074	0,818
SB 4a have education in line with capacity	-0,326	0,077	0,000

SB 4b keep abreast of current events	0,058	0,062	0,349
SB 4c participate in cultural events	0,111	0,056	0,050
SB 5 have a satisfying social life	0,160	0,084	0,059
SB 6 live in pleasant environments	-0,137	0,099	0,168
SB 7 act according to personal integrity	-0,056	0,098	0,571
not single	0,220	0,145	0,133
parents divorced	-0,351	0,205	0,090
parental home rented	-0,229	0,296	0,440
a previous non-successful attempt to higher education	-0,112	0,250	0,654
chance to pass	0,022	0,007	0,003
extraversion	0,091	0,059	0,130
emotionally concerned	-0,081	0,051	0,117
mood	0,121	0,097	0,217
_cons	3,400	0,858	0,000
Number of observations	107		
F(19, 87)	12,33		
Prob > F	0,000		
Adj R-squared	0,670		

b) Modeling functionings

The previous section shows that general satisfaction is determined by the functionings of the respondents. The question that emerges is then what determines these functionings? The triangle suggests that functionings are influenced by the capabilities people have. We estimate every functioning separately using the capabilities and other characteristics.

Different from Anand & Van Hees (2006), we include all the capabilities (so also these from other life domains) for every functioning, as we can think of functionings that are determined by capabilities from other domains. First, the TABLE XI shows that the capabilities from the different life domains significantly and positively influence the corresponding functionings. The functioning ‘be in good health’ is influenced by the capabilities from the other items within the same life domain (‘do sports’ and ‘eat healthy food’). This significant, positive effect of the functioning - specific capabilities is stronger in the cases of ‘leading a happy life’ and ‘having a satisfying social life’. In two cases, the specific capability does not influence the corresponding functioning: ‘satisfied with what is achieved’ and ‘education in line with capacity’.

The functioning 'satisfied with what is achieved' is not influenced by any of the capabilities, but only by two characteristics. Not surprisingly the experience of a 'non-successful previous attempt to higher education' has a very strong negative impact on this reported functioning, while thinking to have a higher 'chance to pass this year' increases the fulfillment of dreams and goals. As was noted in the previous section, the functioning 'education in line with capacity' decreases general life satisfaction. Here we have some additional information on those who score higher on that functioning: male students with more possibilities for cultural participation but fewer capabilities for a satisfying social life.

TABLE XI indicates that there is also a cross – functioning effect of some capabilities, not surprisingly especially from the capability of 'leading a happy life'. The possibility 'to lead a happy life' significantly increases the level of several other functionings ('do sports', 'eat healthy food' and 'have a satisfying social life'). Also other cross – functioning effects are meaningful: the possibility to 'do sports' increases the happy life and health functionings, the capability to have education or social activities decreases the time left to do sports.

Looking at the socio-economic characteristics, we notice that the impact of these characteristics on the functionings is most prominent in the life domains 'healthy life' and 'education, information and culture'. In line with Anand & Van Hees (2006) we do not find any significant socio-demographic variables to explain the functioning levels in the life domains 'social life', pleasant environment' and 'personal integrity'. These last two functionings are determined only by the corresponding capability. Additionally, the 'social functioning' is also influenced by the 'happy life' capability. This observation is related to the more psychological nature of the functionings as described in life domains 1/2/5/6/7. In general, the functionings 3 and 4 are more objective, and so have more socio-economic explanations.

Both a 'non-successful previous attempt to higher education' and thinking to have a higher 'chance to pass this year' have significant effects on different functionings. The characteristic that is significant in five functioning models is 'the chance to pass'. Thinking to have a higher chance to pass increases the level of the functionings 'leading a happy life', 'reaching dreams and goals', 'doing sports', 'eating healthy' and 'having education in line with capacity'. Besides for the functioning 'satisfied with what is achieved', a 'previous non-successful attempt to higher education' also decreases the functionings 'doing sports' and 'eating healthy'. All of this emphasizes again the specificity of our sample.

The situation of the parents and the sex of the respondents are significant for several functionings. When the parents are divorced or are part of newly composed family, this increases the functioning level of 'being in good health' but decreases the levels of 'doing sport', 'keeping abreast of current events' and 'participation in cultural

events'. Woman report a significant lower level of 'doing sports', 'having education and training in line with capacity' and 'keeping abreast of current events'.
The personality variables have only a limited impact. More 'extravert' and more 'punctual' students participate more in cultural events and emotionally unconcerned students have better health functionings. The 'mood' influences only one functioning: 'participation in cultural events' (positive impact).
We see that there are some interesting differences between the explanation of life satisfaction (tables 8 / 9/ 10) and the understanding of the functioning levels (TABLE XI) that create that satisfaction. First, the student specific variables a 'non-successful previous attempt to higher education' and thinking to have a higher 'chance to pass this year' both have an influence on some functionings, but only the 'chance to pass' has a direct effect on general life satisfaction. Also, general life satisfaction is not directly gender-related, but some functioning levels are. The parental situation clearly influences some functioning levels while the impact on general satisfaction can only be found on a lower significance level.

c) Modeling capabilities

The lowest level in our triangle consists of the capabilities, for which we put forward the hypothesis that these are determined by socio-economic characteristics. TABLE XII presents the estimation results for all the different capabilities and also for the item 8: 'capabilities in general'. Looking first at this general question (the last column in TABLE XII) we see that five characteristics have a significant impact on capabilities in general: a higher 'final score in the third stage of secondary education' increases the capabilities while a 'non-successful previous attempt in higher education' decreases the capabilities in general. Students from whom the parents are owner of their house have more capabilities in general. More strict parents reduce the (reported) capabilities of students and extraverted students have more capabilities in general.
In the previous models (general satisfaction and achieved functionings) the impact of socio-economic characteristics was rather limited, except for the life domains 'healthy life' and 'education, information and culture'. Here, the very first finding is that it is just for those two (more objective) life domains that we obtain not much significant models. Only the capability to 'do sports' and to 'keep abreast of current events' generates a significant model. 'Living in a student's apartment' has a large negative impact on both items. Being away from home during the week (at least) reduces the possibilities to do sports and to keep in touch with the news. Also intensive study behaviour obviously decreases the time left to do sports.
For the other (more psychological) capabilities, the socio-economic variables have a more prominent role to play. For these capabilities, the socio-economic

characteristics influence the capabilities and thus only indirectly the achieved functioning levels.

Characteristics related to the parents are especially important for the capabilities related to a 'satisfying social life' and a 'pleasant environment'. Having 'strict parents' reduces both capabilities. The capabilities 'to have a satisfying social life' are further diminished when the parents are divorced or are part of a new composed family. The capabilities to 'live in pleasant environments' are strongly reduced when the parents are not the owners of their house.

Extraversion is the personality trait which has the largest impact. It increases the capabilities for the 'more psychological' capabilities (domains 1/2/5/6). Students who like to be prominent, seem to create more capabilities for themselves. The capabilities for 'doings sports' and 'keeping abreast of current events' are negatively influenced when people have a more creative (and less practical) attitude. A better 'mood' increases the capabilities to 'lead a happy life' and to 'reach goals in life', but decreases the capabilities to 'keep abreast of current events'. In tables 8 and 9 we noticed that extraverted students have more life satisfaction, an effect that vanished when controlling for functionings (TABLE X). TABLE XII shows that extraversion has no direct influence on the more psychological functionings. So, it is not extraversion as such that creates life satisfaction. Satisfaction originates from the indirect effect of extraversion via capabilities on (higher) functionings. A similar reasoning holds for 'mood' and to a lower extent for 'emotionally concerned'.

Thinking to have a higher 'chance to pass this school year' increases capabilities for 'social life', for 'integrity' and for 'reaching goals in life'. A previous 'non-successful attempt in higher education' has no influence on any of the specific capabilities. This results parallels with the fact that a 'non-successful attempt in higher education' has impact on the achieved functionings, but not on the general satisfaction. A higher 'chance to pass this school year' has a positive impact on all levels.

A higher final score in the third stage of secondary education increases the 'social capabilities' and the capability to 'live in a pleasant environment'. Having more mathematics in the third stage of secondary schooling decreases the possibilities for 'reaching dreams in life' as well as the possibilities for 'social life' and 'personal integrity'.

'Not being single' increases the possibilities for happiness, but these are lower when one has to pay partly for his studies.

d) Summary and conclusion

If one uses general life satisfaction as the variable to be explained, we find that general life satisfaction is strongly influenced by (higher) reported functioning levels, and not by (higher) capabilities. The tentative conclusion (based on a sample of

students) is that capabilities do not directly provide life satisfaction, but only indirectly when being realized (achieved) as real functionings. These results would confirm the capabilities approach to wellbeing as it is summarized in the wellbeing triangle.
We also find that the functioning levels are sensitive to some influences (as a 'non-successful previous attempt to higher education' and gender) that have no direct effect on life satisfaction. Achieved functionings are higher when the (reported) capabilities are higher. We find a distinction between the more objective functionings ("health, education,…") and the more subjective ones ("reaching dreams, social life, personal integrity"…), the latter being sensitive to socio-economic influences but the former not. The population specific parameter, thinking to have a higher 'chance to pass this school year', has a positive impact on all levels. The personality trait 'extraversion' has impact on the (psychological) capability level, but not directly at the functioning or satisfaction level.

Table XI. Ordinal logit estimation results for functionings explained by capabilities and socio-economic characteristics

	SB 1	SB 2	SB 3a	SB 3b	SB 3c	SB 4a	SB 4b	SB 4c	SB 5	SB 6	SB 7
SQ 1 lead a happy life	2,077***	0,504*	0,171	0,789***	0,943***	0,269	0,134	0,132	0,914***	-0,080	0,390
SQ 2a reach dreams in life	0,454	0,122	0,083	-0,304	-0,279	0,085	0,216	-0,359	0,488*	0,205	0,319
SQ 2b reach goals in life	-0,473	0,397	0,558	-0,022	-0,306	-0,505	-0,372	-0,461	-0,577	0,199	-0,372
SQ 3a be in good health	-0,286	-0,087	-0,344	-0,512*	-0,063	0,210	0,142	-0,335	-0,296	-0,502*	0,228
SQ 3b do sports	0,706**	0,456*	0,791***	1,471***	-0,099	0,077	-0,300	-0,214	-0,502*	0,064	0,157
SQ 3c eat healthy food	0,056	0,137	0,803***	-0,072	0,781***	0,005	0,120	0,534***	0,355	0,156	0,060
SQ 4a have education and training	-0,342	-0,372	-0,090	-0,815**	0,100	0,141	-0,146	-0,121	-0,425	0,272	-0,609*
SQ 4b keep abreast of current events	0,036	-0,081	-0,456	-0,110	-0,262	-0,261	1,096***	-0,060	0,197	-0,366	-0,376
SQ 4c participate in cultural events	-0,142	-0,040	0,098	0,243	0,001	0,439**	-0,081	0,475***	0,082	0,033	0,178
SQ 5 have a satisfying social life	-0,334	0,124	-0,106	-0,664**	-0,259	-0,774**	-0,248	-0,411	1,848***	-0,166	-0,297
SQ 6 live in pleasant environments	0,540	-0,178	0,047	0,355	0,143	0,558*	0,156	0,534	-0,048	0,750**	0,443
SQ 7 act according to personal integrity	-0,743**	0,131	0,257	-0,118	0,052	0,435	0,473	-0,095	-0,390	0,576	0,959***
Woman	0,184	0,030	-0,494	-1,852***	-0,277	-1,484***	-1,704***	0,419	-0,781	0,071	-0,261
not single	0,393	-0,327	0,590	0,048	-0,446	-0,257	0,023	-0,063	-0,426	0,674	0,155
living in student's apartment	0,209	0,277	0,071	-0,124	-0,769	0,207	0,086	0,589	0,651	0,059	-0,064
pay (partly) for studies	1,282	0,031	-0,684	1,022	0,552	-0,353	1,862**	0,392	-0,153	0,510	-0,393

number of siblings	0,279	-0,376*	-0,216	-0,338*	0,042	-0,168	0,456**	0,026	0,061	-0,371	0,157
no job while being a student	0,073	0,396	0,977*	0,331	0,429	-0,097	-0,345	-0,020	-0,033	-0,196	0,209
mother bachelor or master degree	0,704	0,135	-0,016	-0,339	-0,392	-0,840*	-1,354***	-0,092	-0,633	0,417	0,010
parents divorced	-0,641	0,393	1,466**	-1,622***	0,036	-0,390	-1,579***	-1,256**	-0,358	-1,119*	0,451
strictness parents	0,268	0,179	0,242	-0,220	0,022	-0,099	-0,414**	-0,144	0,092	-0,066	0,215
a previous non-successful attempt to HE	-1,205	-3,001***	-1,054	-1,446**	-2,844***	-0,605	0,260	-0,289	0,992	-0,272	0,700
chance to pass	0,064***	0,065***	-0,008	0,051***	0,071***	0,065***	0,023	-0,006	0,007	0,037*	0,024
extraversion	-0,060	0,294	-0,001	0,019	0,250	0,030	0,244	0,456**	0,027	0,207	0,385*
less punctual	0,118	-0,029	0,229	-0,079	-0,199	-0,112	-0,031	-0,357**	0,030	0,174	0,294*
emotionally concerned	-0,104	-0,023	-0,326**	-0,291*	-0,164	0,015	0,007	0,056	0,079	-0,049	-0,257
Mood	0,286	0,258	0,085	-0,094	-0,531*	0,280	0,370	0,884***	-0,200	-0,041	-0,056
Number of observations	107	107	107	107	107	107	107	107	106	107	107
LR chi2(27)	91,56	62,99	78,62	86,97	69,57	41,29	77,22	58,57	79,99	55,01	58,86
Prob > chi2	0,000	0,001	0,000	0,000	0,000	0,039	0,000	0,000	0,000	0,001	0,000
Log likelihood	-141,67	-123,21	-112,36	-148,98	-133,68	-128,36	-131,50	-153,34	-103,58	-101,06	-101,47

*** significant at 1%; ** significant at 5%; * significant at 10%

Table XII. Ordinal logit estimation results for capabilities explained by socio-economic characteristics

	SQ 1	SQ 2a	SQ 2b	SQ 3a	SQ 3b	SQ 3c	SQ 4a	SQ 4b	SQ 4c	SQ 5	SQ 6	SQ 7
Woman	1,024*	1,061*	0,333	-0,385	-0,698	-0,191	-0,149	-0,741	0,641	0,386	0,453	0,523
not single	1,249***	-0,051	0,430	-0,111	-0,012	0,235	-0,005	-0,216	-0,246	0,730*	0,431	0,250
living in student's apartment	-0,471	0,350	-0,277	-0,268	-1,554***	-0,429	-0,412	-1,710***	-0,849**	-0,541	-0,499	-0,713
pay (partly) for studies	-1,843**	-0,361	0,623	1,700**	0,155	1,509*	1,591*	0,766	0,947	-0,731	-1,147	-0,996
number of siblings	-0,122	0,221	0,002	0,086	-0,228	0,011	0,228	-0,169	0,235	-0,077	0,100	-0,324*
hours math in third stage sec. ed.	-0,018	-0,429***	-0,203	-0,137	-0,095	-0,098	-0,190	-0,039	-0,320**	-0,343**	-0,085	-0,323**
final score in third stage sec. ed.	0,057	0,337	0,355	0,361	-0,314	0,235	0,355	0,493	0,032	1,124***	0,874**	0,423
intensive study behaviour (sec. ed.)	-0,577	0,033	-0,399	-0,300	-1,468***	-0,123	-0,598	-0,628	-0,442	-0,959*	-0,051	-0,769
no job while being a student	-0,089	0,806*	0,575	-0,463	0,049	0,268	-0,016	-0,417	0,064	0,246	0,551	0,545
mother bachelor or master degree	0,836*	-0,165	0,112	-0,485	-0,571	-0,116	-0,460	0,445	1,063**	0,628	0,306	0,867*
parents divorced	0,580	-0,973*	-0,648	0,149	0,170	0,356	-0,532	-0,045	-1,375**	-1,487**	0,238	0,503
parental home rented	-0,802	-0,047	-0,533	-1,814**	-0,879	-1,840**	-0,639	-1,497*	0,805	-1,117	-2,371**	-1,108
strictness parents	-0,214	-0,173	-0,043	0,031	-0,260	-0,082	0,093	-0,197	-0,227	-0,687***	-0,608***	-0,337*
a previous non-successful attempt to HE	0,064	-0,252	-0,748	-1,376*	0,305	-1,160	0,273	-0,929	0,016	-0,125	-0,331	-0,885

chance to pass	0,007	0,024	0,041**	0,037*	0,023	0,045**	0,019	0,028	0,017	0,046**	0,036*	0,042**
extraversion	0,799***	0,560***	0,540***	0,095	0,200	-0,004	0,072	0,242	0,197	1,086***	0,898***	0,321*
Altruism	-0,153	-0,253	-0,224	0,142	-0,146	0,287	-0,164	0,092	0,059	-0,119	0,219	0,287
less punctual	0,079	-0,107	-0,111	0,233	0,080	0,067	0,128	0,295*	-0,039	0,015	0,221	0,162
emotionally concerned	-0,246	-0,186	0,096	-0,040	0,023	-0,302**	0,028	0,189	0,145	-0,264	-0,331**	-0,056
creativity	-0,248	0,142	-0,226	-0,277	-0,355**	-0,074	0,028	-0,344*	-0,032	-0,317	-0,324*	-0,147
Mood	0,603**	0,346	0,606**	0,069	-0,240	0,009	-0,128	-0,561**	0,246	0,050	0,319	0,224
Number of observations	106	105	106	105	106	105	106	106	106	106	105	106
LR chi2(19)	54,06	44,61	37,28	21,10	46,95	27,30	19,18	40,82	30,65	76,67	61,68	38,86
Prob > chi2	0,000	0,002	0,016	0,450	0,001	0,161	0,574	0,006	0,080	0,000	0,000	0,010
Log likelihood	-118,845	-137,11	-119,151	-112,02	-110,84	-136,60	-112,51	-115,64	-161,00	-99,39	-106,79	-119,11

*** significant at 1%; ** significant at 5%; * significant at 10%

2.3.4. RESULTS FOR A SURVEY INVESTIGATING WELLBEING IN FLANDERS (LEVO 2009)

a) Description of the sample and objective measurements

In the months October and November 2009, the LEVO 2009 survey was conducted. There are 1680 respondents representing socio-economic groups (life – situations) as follows:

- Students (258)
- Part-time workers (259)
- Full-time workers (315)
- Pensioners (254)
- Unemployed (282)
- Househusband/wife (203)
- Not working (not capable to work) (109)

As it was argued in section two, the sub-sample method of the survey allows to apply a weighting procedure such that the weighted sample becomes more representative. TABLE XIII (first column) provides the data on the distribution of the population (Flanders) according to some characteristics. The situation 'working full-time' only represents 19% of our sample, but is 46% of the Flemish population. Consequently, the 315 full-time workers are the 'bottom line' of the weighting system. This means that all those cases are included in the weighted sample (weight equal to one). For the other life-situations, a weighting procedure (with weights lower than one) is applied.

Next to considering the life situation, also the gender distribution and the distribution wrt age is used (for each of the life situations) to construct the weighted sample. TABLE XIII compares the distribution of the Flemish population with the distribution of the unweighted and the weighted sample. The information of the 1680 respondents is used in the weighted sample, but as most of them have a weight lower than one the sum of the cases reduces to 686.
As a result, the weighted sample is representative according to gender, age and life situation. TABLE XIII also shows that the weighting improves the distribution wrt the educational level, but an under-representation of the lower-educated (over-representation of the higher-educated) remains.

Table XIII. Weighted and Unweighted sample compared to the Flemish population according to gender, age, life situation and education.

	Population	Sample Unweighted	Weighted
Gender			
Men	49,63%	40,40%	47,40%
Woman	50,37%	59,60%	52,60%
Age			
from 18-29	18,91%	33,50%	21,70%
from an 30-49	38,08%	31,60%	35,70%
from 50-64	24,78%	24,00%	25,70%
from 65-80	18,23%	10,80%	16,90%
Education			
Lower educated	21,44%	8,10%	11,90%
Lower secondary	21,58%	12,90%	16,90%
Higher secondary	32,58%	38,20%	31,20%
Bachelor	13,80%	24,10%	24,20%
Master	10,60%	16,70%	15,80%
Life situation			
Working full-time	45,92%	18,80%	45,90%
Working part-time	13,87%	15,40%	13,90%
Unemployed	3,69%	16,80%	3,70%
Student	4,16%	15,30%	4,20%
Pensioned	21,23%	15,10%	21,10%
Househusband/wife		12,10%	8,10%
Incapable to work	11,13%	5,30%	2,30%
Other		1,20%	0,70%

b) Well-being and its determinants

The results with the sample of students (see previous section, results that will be published in 2011 in the journal Social Indicators Research; revised paper in appendix) show that it is meaningful to measure functionings and capabilities and to use capabilities as an alternative indicator for wellbeing (alternative to satisfaction with life). Therefore, we focus now first on these kind of wellbeing measurements for the Flemish population (and the sub-samples). Secondly, we present some explanatory modeling results.

Life satisfaction, capabilities and happiness with reference levels

Four different kind of wellbeing variables, and the mean of those variables for the Flemish population, are presented in TABLE XIV:
GS: General Satisfaction with life (from 1 to 10) is the answer to the question *"how is your satisfaction with life in general?"*
SC: Subjective measurement of Capabilities in general (from 1 to 7) is the answer to the question *"how do you consider your possibilities/opportunities in life in general ?"*
AWC: Happiness with comparison to an Average World Citizen (from 1 to 10, with the external reference point equal to 5/10) is the answer to the question *"how happy do you feel, knowing that an average world citizen would answer with a score of 5"*
ACSA: Anamnestic Comparative Self Assessment of happiness (from 1 to 10, with an internal reference point equal to the worst / best period in life) is the answer to the question *"how happy do you feel now, comparing with those two periods".* The two previous questions asked the respondent to describe his best/worst moment in life, and to give a score to these moments on a scale from one to ten.

Table XIV. Description for the different wellbeing indicators for the weighted sample.

	General satisfaction (GS)	Happiness: AWC	Happiness: ACSA	Capabilities in general (SC)***
N	662	670	621	661
Mean	7,6765	7,1275	7,2359	5,3565
Median	8,0000	7,0000	7,0000	6,0000

***** Capabilities in general** on a scale from 1-7, converted on a 1-10 scale this **is 7.65**

The weighted sample (TABLE XIV) shows that General Satisfaction with life is equal to the Subjective measurement of Capabilities in general (GS = SC). Also, we see that wellbeing indicators without reference are higher than those with reference, internal as well as external (GS = SC > ACSA > AWC).
Looking at TABLE XV, we observe that the unemployed and the disabled have the lowest wellbeing, while wellbeing is highest for the students and the employed (except for AWC). Noteworthy, for students, unemployed and disabled persons, General Satisfaction with life is lower than the Subjective measurement of Capabilities in general (GS<SC), while for pensioners General Satisfaction with life is higher than the Subjective measurement of Capabilities in general (GS>SC). One could say that the Subjective measurement of Capabilities is more future oriented or forward looking, while General Satisfaction with life is more backward looking. We

notice that househusbands/wifes have a better ranking when the external reference external (AWC) is used, and ACSA > AWC only for employed and incapables.
TABLE XVI shows for ACSA the smallest spread between the best and worst moment for pensioners and the highest for househusbands/wifes.

Table XV. Averages of the different indicators by sub-sample.

	Satisfaction (GS)	AWC	ACSA	Capabilities in general	
	Scale 1-10			scale 1-7	Converted 1-10
Working full-time	7,76	7,13	7,34	5,45	7,79
Working part-time	7,83	7,22	7,35	5,49	7,84
Student	7,91	7,24	7,26	5,81	8,30
Pensioner	7,73	7,22	7,22	5,22	7,46
Unemployed	7,00	6,53	6,54	5,14	7,34
Incapable to work	6,36	5,78	5,86	4,66	6,66
Househusband/wife	7,67	7,21	7,11	5,41	7,73

Table XVI. Worst and best moment from ACSA questions by sub-sample

	Happiness score (ACSA)		
	happiest moment	worst moment	actual moment
Working full-time	9,02	2,29	7,34
Working part-time	9,01	2,40	7,35
Student	9,05	2,13	7,26
Pensioner	8,58	3,28	7,22
Unemployed	9,02	1,77	6,54
Incapable to work	8,89	1,80	5,86
Househusband/wife	9,36	1,75	7,11

Determinants of well-being

TABLE XVII reveals, for (the normalized scores of) the four wellbeing indicators, which are the determining variables.

Table XVII. Determinants for the different indicators

	SC_n	GS_n	AWC_n	ACSA_n
Student	0,038	0,005	0,017	0,000
Pensioner	-0,013	0,017	-0,001	-0,030
Unemployed	0,005	-0,027	-0,022	-0,040
incapable to work	-0,029	-0,071 **	-0,057	-0,038
househusband/wife	-0,004	0,006	0,000	-0,012
other actual position	0,080	0,002	0,065	0,046
Woman	0,029 *	0,022 **	0,005	0,014
Age	0,000	0,000	0,001 **	0,000
educational level	0,024 ***	0,005	0,016 **	0,004
having a relation	0,005	0,024 *	-0,013	-0,002
number of children	0,003	-0,011 **	-0,005	-0,006
educational level mother	-0,023 **	0,000	-0,009	-0,015
health perception	0,019 ***	0,023 ***	0,013 **	0,027 ***
perception of family wealth	0,039 **	0,033 ***	0,044 ***	0,010
social activities (% of time)	0,002 *	0,000	0,001	0,000
no scope to develop	-0,037 ***	-0,026 ***	-0,021 **	-0,006
% of expectations realised	0,002 ***	0,001 ***	0,001 ***	0,002 ***
introvert-extravert	0,006	0,003	0,000	0,007 *
selfish- altruistic	0,002	0,008 **	0,006	0,009 *
Conscientious	0,001	-0,008 *	0,001	-0,004
Dutiful	0,006	0,012 **	0,004	0,009
emotional concerned	-0,002	-0,007 *	-0,007	-0,005
optimism	0,015 **	0,003	0,012 **	0,004
unrealistic expectations	-0,016	0,002	-0,025 **	-0,028 **
disappointment wrt expectations	-0,009	0,014 *	0,006	0,011
_constant	0,346 ***	0,319 ***	0,318 ***	0,339 ***
N	416	416	416	416
Prob>F	0,000	0,000	0,000	0,000
Adj R2	0,3039	0,4101	0,2760	0,3027

Clearly, the variables health and realisations are **important for all indicators**; while wealth and scope to develop are important for all but ACSA.

Subjective Capabilities are higher when the educational level is higher (and when the educational level of the mother is lower) and for people that are more optimistic. General Satisfaction is positively related to altruism, dutifulness and gender, but negatively to the number of children.

Considering the happiness questions with internal reference point (ACSA), we see that the background and personality characteristics are unimportant. The happiness reporting with an external reference point (AWC) is positively related to age, the educational level and optimism.

2.3.5. CONCLUSIONS AND RECOMMENDATIONS

First, we present some general conclusions about the wellbeing for different population samples, as well as for the Flemish population as a whole. Secondly, some of the conclusions are related to the challenge of research on wellbeing in general. We finish with some points of particular interest when making the move from (this) research to policy and to the idea of sustainable development.
Since this part of the Wellbebe-project was primarily a fundamental research project, the results as such have to be considered as a set of preliminary conclusions related to (research on) wellbeing in Flanders. Their purpose is on the one hand to illustrate the potential of primary data-gathering analysed it in a consistent framework. On the other hand there are some general findings concerning wellbeing research and its policy relevance.

2.3.5.1 Wellbeing results.

Results with a sample of students show that it is meaningful to measure functionings and capabilities and to use capabilities as an alternative indicator for wellbeing (alternative to satisfaction with life)[7]. Therefore, we focused on this kind of wellbeing measurements for the Flemish population (and sub-samples). We compare traditional wellbeing measurements to newly developed ones using data gathered in 2009. We observe that the unemployed and the disabled have the lowest wellbeing, while wellbeing is highest for the students and for the employed.
Looking at the drivers of these two kinds of operationalizations of wellbeing, the variables health, wealth, realisations and scope to develop are (significantly) important for both. On the other hand, there are some differences that are

[7] These results will be published in the journal 'Social Indicators Research' (forthcoming, 2011).

noteworthy. ‘Subjective Capabilities’ are higher when the educational level is higher and for more optimistic people. General Satisfaction is positively related to altruism, dutifulness and gender, but negatively to the number of children. This implies that the choice of the ‘outcome variable’, in the context of a multi-dimensional wellbeing measurement, is not without consequences for pinpointing the important (and the importance) of ‘drivers’ of wellbeing. Compared to ‘General Satisfaction with life’ which is a more backward looking variable, the ‘Subjective measurement of Capabilities’ is more future oriented.

Estimates based on the students sample (using a system of structural equations as an application of the wellbeing triangle) also show that the socio-economic characteristics have especially an influence on capabilities, capabilities influence functionings and it are mainly functionings which influence life satisfaction. So, we discover that there are some interesting differences between the explanation of life satisfaction and the understanding of the functioning levels that create that satisfaction. The tentative overall conclusion is that capabilities do not directly provide life satisfaction, but only indirectly when being realized (achieved) as real functionings. Again, this shows that the choice of the wellbeing structure or model, in the context of a multi-dimensional wellbeing measurement, is important for the findings concerning the (importance of) ‘drivers’ of wellbeing. In future research, we want to see if the student sample results are valid for the Flemish population as a whole.

2.3.5.2 Wellbeing research.

The results, as described above, explicitly refer to wellbeing as a multi-dimensional concept. Taking stock of the theoretical and applied literature on wellbeing, happiness or satisfaction with life, capabilities, quality of life, needs and basic needs… one cannot but conclude that wellbeing is a multi-dimensional issue in several ways: multi-disciplinary research, multi-level, dynamic (in time), multi-conceptual, data gathering with several dimensions, … We made the choice to evaluate individual wellbeing at three distinct levels: possibilities or opportunities in life (capabilities), actual life situations (functionings) and the life satisfaction. In reality, wellbeing will be some combination of aspects of this ‘wellbeing triangle’. In fact, the triangle mainly serves to give some structure to the multi-dimensionality.

Empirical modelling should then consider the relative importance of the distinct levels and of the relevant dimensions within each level. This raises the issue of weighting or aggregating the dimensions that are chosen. Note that, implicitly, dimensions that are not included are given a weight equal to zero. On the weighting, there are opposite views. One can choose to be “paternalistic or perfect” (ie the researcher decides on the weights to use), one can choose a method that includes some kind of

"participatory or democratic or respectful" weighting procedure (ie the individual decides on the weights to use), or one can fall back on a purely data-based statistical technique.

In the research based on the sample of students, we choose to use satisfaction with life as dependent variable in the structural model. This is a way to integrate the literature on happiness or life satisfaction with that on capabilities. The issue of weighting is then relying on the principle of revealed preference. The subjective wellbeing information is used as aggregator for the underlying functionings and capabilities. At the same time, we know that this choice has consequences, as they are illustrated above for both samples (students and Flemish population). When choosing for capabilities as an aggregator, other variables would appear to be important in relation to wellbeing. This is an important issue that should be developed in further research, theoretically as well as empirically.

2.4. The citizens' panel on indicators of wellbeing

2.4.1. THEORETICAL BACKGROUND

There are at least three reasons why building indicators of wellbeing should be conceived of as a co-construction process involving as far as possible not only scientists, statisticians and policy makers but also the population itself.

1. The first reason is that indicators of wellbeing must reflect or at least be compatible with the widest diversity of perspectives on wellbeing, as they are present in society.
2. The second reason is that people are - sometimes without being conscious of it - experts of their own society. Admittedly, it is a different kind of expertise than the one of scientists. More than on analytical thinking, it relies on living experiences but it is a kind of knowledge we cannot dispense with.
3. The third reason is that indicators should, as far as possible, make sense for the population. People should be able to make the link between the indicators and their own situation and living experience.

If the necessity to use participatory methods in building wellbeing indicators is now quite widely acknowledged, there are still very few – if any – experiences on which to rely on. In terms of participation and indicators, we identified two strands of existing experiences, but which were only indirectly in connection with the present objective. On the one hand, participatory processes with stakeholders and citizens have been used in the past, and still are, in the realm of monitoring communities' living environment. In this direction, there exist some interesting experiences in

participatory development of SD-indicator sets or quality of life indicator sets in urban areas, or in rural communities, for instance. On the other hand, participation and consultation of the population have been implemented as forms of validation processes in a number of indexes. The most common example of this is probably the index of Osborne and Sharpe, where the developers advocate that populations should be consulted according to a given participatory protocol for their own weightings of the indicator scheme. Both strands of existing participatory experiences are of rather limited use to our objectives. Local community indicator sets, whether determined in a participatory way or not, are meant to monitor neighbourhoods or cities. There is an enormous difference to developing an aggregated index accounting for the evolution of wellbeing in a society. There is equally some distance to our work with respect to experiences that allow for some minor, punctual interference of populations. These cannot be labelled as exercises of co-construction, but are rather assuring that population is consulted on the most value-rich moments of a valuation, for instance when determining weights.

With a lack of experiences, and more so of meta-exploitation of such participatory experiences, it is difficult to know if it is better to start from a predefined framework or to let the participants elaborate a common language or a common conception of wellbeing. Contrarily to the operation led currently by the IWEPS (Institut Wallon de l'Evaluation, de la Prospective et de la Statistique), we decided:

- To start from a definite conception or language of wellbeing instead of letting the participants express their own one, and then come (if possible) to a common position on the nature of wellbeing?
- To chose the needs-satisfier language instead of the stress-coping one, or the capability-functioning approach as framework.

The first decision has been motivated by the feeling that letting a common conception and language on wellbeing emerge from the debates would take too much time without leaving enough room for what we wanted to focus on: the selection and ranking of indicators. Considering how large a theme such as wellbeing can be, it was hopeless to try to build an original discourse on wellbeing from scratch and translate it in relevant indicators in the 3 or 4 days we could afford. Precisely, it is the indicators we were interested in most. Our intention was not to let every participant express his/her own conception of wellbeing (something we had already done, by the way, through focus groups) and then go thanks to the deliberation towards a common position. Actually, we didn't believe a consensus on wellbeing was necessary or even desirable. We just wanted to put the participants in a kind of "impartial spectator" position with respect to a given society (their own, in fact) in which each one pursues its conception of the good life under the umbrella of given economical, legal, political and social institutions. These institutions oppose some constraints and open some opportunities for the different life projects knowing that

what is seen as a constraint from a life project perspective can be seen as an opportunity from another perspective. For instance, the legal limitation of the working week to 35 hours can be perceived as a constraint for those whose life project implies working more for earning more and as an opportunity for those who prefer to devote more time to leisure or not-for-profit activities. Also, the tax system is seen as a constraint by those who think they pay too much but it opens opportunities for all by providing for public goods, delivering collective services and financing safety nets.

What is to be assessed through indicators of wellbeing is this bundle of constraints and opportunities looked at from the more diverse (but legitimate and reasonable) conceptions of the good life as possible. This is what makes the participation of random samples of the population to the evaluation debate necessary; to guarantee that the wider variety of life projects has been represented.

Obviously, this is a very different perspective than the one consisting in assessing wellbeing by asking a random sample of the population to express their own, personal subjective level of satisfaction or happiness. Even if answering the questions asks for some reflexive evaluation and not just purely emotional feelings, the respondent having to make a kind of internal deliberation about her objectives and achievements, etc., the information collected concerns only that specific person, not the social institutions and activities as such. Clearly, the analysis and aggregation of the data collected at that individual level can – and in fact do – help evaluating social arrangements. Actually, the two perspectives are complementary, not opposite. On the other hand, it is also true that, even when participating in a group discussion on social institutions and arrangements, each participant, even acting as far as possible as an impartial spectator, comes with his own “personal equation” and subjectivity. However, it is precisely the objective of devices such as citizen juries to gather a bundle of different positional perspectives on the same topic or issue. (Note that Sen’s (1993) distinction between subjectivity, positional objectivity and trans-positional objectivity is highly relevant in this context and would deserve a more lengthy discussion)

Once admitted that the point was not to build a common discourse on wellbeing but, starting from an accepted pre-existing one, to deliberate on the way to evaluate what a given society makes possible or not in that respect, the problem was to choose the most suitable language for facilitating communication and mutual understanding.

We decided to use Max-Neef’s list of human fundamental needs. According to Max-Neef, these needs are transcending the diversity of life such as culture, race, ethnicity or personal wealth. Max-Neef contends thus that needs are universal conditions which configure humans’ quest for a good life. Simultaneously, the relative importance attached to each need, their translation, are different with respect to culture, people, countries, socio-political context, maybe even with respect to climatic conditions and natural environment. The quest for satisfying individual needs is also

subject to evolutions in time, different when people are young or old, and different according to the roles people have in society. The representation of needs changes according to spheres of life or life situations. Max-Neef worked out a restrictive list of 9 human needs:

- ***Subsistence*** accounts for our need to satisfy our material existence as humans or societies. On the level of individuals, subsistence refers for instance to shelter or food. On a collective, societal level in our European societies, subsistence refers for instance to the accessibility of emergency health care or substitution incomes in case of unemployment.
- ***Protection*** relates to our need to be secure from danger or hazards which we might encounter along our lives. On a collective level, a series of institutions are preventing such hazards to impact us, for instance, police in the case of crime or fire services. On a personal level, we can rely on social security or health insurances to protect us from direct impact.
- ***Affection*** accounts for the fact he humans are fundamentally social beings and that our satisfaction with live depends also on a minimal level of affection, or tenderness, from our co-fellows, and that we are trying to avoid solitude, social isolation and exclusion.
- ***Understanding*** relates to our aptitude to grasp the significance of the world which surrounds us; we are driven – out of curiosity maybe – to investigate and explore our common world and want to understand our social, human and natural environment. We are in need for a certain amount of information which allows us to conceptualize and formalize our world(s). Education and a general free access to information and to culture are among the main vectors to fulfil this need.
- ***Participation*** refers to our drive to take part in the society we are living in, to voice, to comment, to become active. Participation might be operationalized by a membership to a political party, but is more fundamentally implemented when we vote in elections, when we discuss with the people around us. In some instances, we participate also to the construction of our societies when we pay taxes, when we contribute to the 'common good' which can be as down-to-earth as to stand for elections to become the president of our communal football or fishing club.
- ***Leisure*** is a fundamental need which relates to the fact that psychologically, and physiologically, we are in need for moments of idleness or activities which are 'unproductive' (in the very first sense). Leisure and rest are fundamentals in our societies balancing out working time.
- ***Creation*** relates to the active participation in building and conceiving our surroundings, be it in artistic terms or in more down-to-earth activities such as home decoration or gardening.

- ***Identity*** refers to our struggle to internal coherence, to insert ourselves as persons in a collectivity. Social ties, cultural belonging, traditions help us to forge our identities. In our materialistic worlds, identity is also mirrored in our belongings, the objects we own or wish we cherish.
- ***Freedom and autonomy*** define our need to have some form of autodetermination, to decide on our own and to be independent.

The choice of this particular list of needs was dictated by the following considerations:

- We knew it had already been used at several occasions by grassroots communities in different countries (Latin America, Europe, USA…) to deliberate about development and public policy at the satisfaction of participants;
- Max-Neef's list is also comprehensive enough without being too long so that it is possible to discuss all its items in a relatively short time without leaving aside important dimensions of wellbeing. For instance, the fact that not only material needs such as subsistence and protection but also so-called "higher" needs such as freedom, participation or identity are taken into account allows making room for more varied conceptions of wellbeing in the discussion. In some way, the inclusion of these high level needs allows to benefit also (at least partly) from some fundamental insights from the capability-functioning approach, namely the importance of having the choice of one's beings and doings. In some way, needs of autonomy and freedom, participation and understanding which are part of Max-Neef's list account for the dimension of "enlightened" choice of one's satisfiers for all needs. One way to make this fully explicit would be to make a distinction between 'substantial" needs (subsistence, security, affection, identity, leisure, creation...) and "procedural" needs or meta-needs (participation, freedom, understanding, fairness).

On the other hand, the choice of a language of needs for discussing wellbeing was expected to bring some important benefits:

- The concept of "need" is easily understood by everyone and enables the communication between scholars and laypersons. People are generally used to look at themselves from a need satisfaction point of view which doesn't mean they overlook the importance of desires, wants and wishes, a point to which we will go back later. Likewise, they are ready to include participation or identity as fundamental needs alongside food, shelter or whatever. This has been experienced during the focus groups at the beginning of the research.
- The needs-satisfaction (or satisfier) discourse is also inter-disciplinary or trans-disciplinary. It allows, better than the capability-functionings (more economics-oriented) or the stress-coping (more medicine-oriented), communication between specialists of different disciplines. Indeed, the need concept can be

found in economics (humanistic economics and post-keynesianism), psychology (positive psychology and notably, self-determination theory), medicine and philosophy.

Admittedly, the need-satisfaction approach has been also vividly criticized by economists (both neo-classical and Marxists), sociologists, and anthropologists, both as a political philosophy and as empirical theory. Although some of these criticisms are well deserved, there have been also many misunderstandings about the need satisfaction discourse.

- The main misunderstanding comes from confusion between basic needs and needs for short and also between basic needs and material or physical needs. There is nothing in the needs-satisfier (or needs-satisfaction) framework that restrict the idea of needs to primary, basic or material ones. On the contrarily, all serious theories of needs acknowledge the reality and importance of psychological, cultural and social needs. It is also true that some political interpretations or practical implementations of the (basic) needs approach in development have overlooked the importance of freedom, participation and identity as fundamental human needs and have inspired a kind of “dictatorship over needs” which sacrificed fundamental human rights against a (general meager but guaranteed) provision of basic satisfiers: food, shelter, clothing, education and health.
- The neglect of freedom, agency and participation by some advocates of the needs-oriented conception of development has led some important thinkers such as Sen (1984) to argue that the needs approach was conveying a vision of man more as a patient than as an agent. To this, it can be answered that being a patient at some moments is also a part of the human condition. It is an inescapable fact of human destiny that men begin and often end their life in states of dependency and that they can also experience situations of illness or disability which greatly restrict their acting potential. A comprehensive theory of wellbeing should not turn its back to this reality but fully integrate it. It is a bit paradoxical that the capability approach which started more or less from the observation that people have different “conversion factors” of commodities into wellbeing (the handicapped were mentioned) , has evolved almost into a theory of freedom and agency at the expense of other characteristics of the human condition. Anyway, a comprehensive theory of human need can accommodate both the dependency and agency dimensions of human life.
- A third common misunderstanding consists of denying the historical and socio-cultural character of two crucial dimensions of a fully elaborated theory of needs: the analysis of their articulation (generally by dominated social groups) and the determination of the level and of the kind of satisfiers considered adequate for their satisfaction. The expression of needs and the struggles over

the definition and level of their satisfiers are socio-political and historical processes so that, while human fundamental needs can be considered universal since they depend on the psycho-biological equipment of the human species, they take quite different forms and appearances according to the society, the culture or the era. In some way, the history of material civilization can be read as a history of the satisfiers of human need for food, shelter, clothes, mobility, etc. Likewise, the history of ethics and politics could be interpreted as the history of the articulation and acknowledgment or denial of the need for freedom, identity and participation.

- Finally, making use of the language of needs in an evaluation context doesn't mean endorsing the somewhat crude functionalist epistemology consisting of explaining every behaviour or institution as the satisfaction of an underlying need. Just like the capability-functioning approach, the theory of needs is a normative, political philosophy discourse not an empirical theory of behaviour or of institutions. Indeed, for the aforementioned reasons, explaining actual practices by the needs they contribute to satisfy is scientifically dull. Obviously they would be no food practices if not for feeding oneself but the almost infinite diversity of eating practices and customs cannot be explained by the universal need for food.

It is important to stress that using the language of needs doesn't imply denying the importance and salience of desires, wants and wishes, nor the importance of culture, imagination or fantasy in shaping human behaviours. Far from ignoring the importance of desires and wants, the need-satisfier language stand as the language of the reflexivity on wants and desires both at the individual and collective level.

For instance, there is a difference between the statement "I'd like a car" and the statement "I need a car", a difference everybody can understand. No justification is expected after the first statement contrarily to the second which can be logically followed by the question "why do you need (or believe to need) a car?" Note that from an economic point of view, it doesn't matter if I buy a car because I think I need it or because I just want it. The difference becomes relevant only if I cannot afford the car and claim that I have a right to some help from the State in order to get it, or if my buying a car threatens legitimate and more urgent needs of other people. In both cases, what will enter in the moral or political deliberation is the comparison between the harm I would endure if I lack the car and the harm others would undergo otherwise. In this deliberation, what will be weighted is the importance of wants with respect to needs and of some needs with respect to others. In sum, from a collective point of view, the distinction between needs and wants is meaningful only in a moral and/or political context, in relation to rights, moral obligations, and claims on social entitlements or shares of some public resources. Note that the same kind of deliberation can also take place inside the individual when facing allocation of

resources problems. In a context of scarcity of means and resources, when it is necessary to choose between incompatible wants, it is common to ask about them "Do I (really) need" them? Which one do I need more?". In such cases, the differences between needs and wants become salient.

- Also, contrarily to wants, needs are objective because they can be assessed by external and impartial observers. Medical doctors and psychologists can, in principle, diagnose unfulfilled physical (food, water, sleep, clothes, shelter…) or psychological (autonomy, recognition, self-esteem…) needs even in people unaware of their needy situation, on basis of specific symptoms generally associated to a deficit in some needs' satisfaction. Thus, a need can be ascribed to individuals even in the absence of any expression or articulation of it (the anorexic's need for food, the desk-bound need for exercise…) and there can be unwanted needs, as they are un-needed wants. Some needs are also objectively ascribed to individuals by the social, economic and cultural norms and values of their society and the necessity to have them satisfied in order to become and stay a fully participating member of it. For example, depending on one's job or others circumstances of life, a car can be a real necessity, not a luxury or a mere convenience. The need for it could be objectively assessed by an impartial observer aware of the existing conditions of membership in our society and informed on the circumstances of living of the needing person.
- Contrarily to wants, some needs – those characterized as basic – are universal because they are constitutive of the biological and psychological make-up of every human being. They belong to human nature. It is important to remark that the universality of human needs is totally compatible with the historic, cultural and sociological relativity of what is considered adequate "satisfiers" for them.
- Contrarily to wants, needs are urgent because not satisfying them is harmful for the physical or psychological health of the person. Of course, the more vital or basic a need, the more harm thwarting it is likely to lead to. More generally, basic needs are a) grave: the harm resulting from their non-fulfilment is very bad and may be irreversible; b) urgent: the harm will ensue rapidly; c) entrenched: they are determined by relatively unchangeable facts of nature; d) un-substitutable or weakly substitutable.
- Finally, contrarily to wants, needs are satiable. This means that if a good or service can satisfy a given need (is therefore a "satisfier" for that need), there is a threshold level of consumption beyond which that good, or its characteristics, may bring no additional satisfaction to the consumer but could possibly harm him.

All these differences explain why needs have moral pre-eminence over wants and why we can feel committed to help satisfy the needs, but the un-needed wants, of

people, even strangers, in a needy situation. This is the main reason why sustainable development is best conceptualised in terms of about needs, not wants (O'Neill 2010).

2.4.2. THE PANEL IN PRACTICE

During three days, thus, led by 2 animators and supervised by 5 researchers, 19 citizens have been invited to think about the wellbeing of their society and the possible ways of measuring it, starting from Max Neef's framework of the needs. The realization of this project was made possible thanks to the financial intervention of the Walloon Region, desirous to dispose of a motivated notice coming from a sample of the Region's population about leads to follow in order to build wellbeing indicators less strictly related to the economic growth or the purchasing power.
The sample of citizens has been recruited by a specialized bureau Sonecom, to which we asked, in order to reach the highest diversity possible in terms of points of view and ways of thinking about wellbeing, to gather people as different as possible according to the following criteria:

- Gender
- Age
- Living location (urban/rural areas)
- Level of education
- Socio-professional category, and
- Occupational status

Moreover, we thought it would be interesting to have in the panel at least one foreign-born person, as well as a person with a disability.
Finally, after a long and quite difficult recruiting process, we ended up with a group of 19 participants, presenting those profiles:

Table XVIII. The panelist's profiles.

AGE	16-20	5%
	21-25	10%
	26-35	16%
	36-50	**37%**
	51-65	32%
	65 et +	0%
GENDER	**Women**	**53%**
	Men	47%
LEVEL OF EDUCATION	High School	26%
	Vocational High School	21%
	University	**53%**
OCCUPATIONAL STATUS	**Employee**	**26%**
	Independent	5%
	Workman	5%
	Unemployed	11%
	Retired	11%
	At home	16%
	Student	16%
	Invalid	5%
	Other	5%

One of the participants was foreign-born (born in Africa, about to be naturalized Belgian) and another one suffered from a light disability.

As TABLE XVIII shows, the panel was not as diversified as expected/desired: indeed, we can observe an overrepresentation of people having a university degree, for example, as well as an overrepresentation of people belonging to the age category 36-50. On the other hand, people in their early thirties are under-represented. Concerning the occupational status and the socio-professional categories, we also deplored a lack of real diversity: indeed, most of the active panelists were working in the tertiary, non- profit sector.

Nonetheless, we think it would have been very difficult to end up with a significantly different panel, regarding to the time and money we could devote to the recruitment process: indeed, it is not really surprising that people who accepted to integrate a panel on such a topic were mostly highly educated and already sensitive (through their professional occupation) to societal questions. Moreover, we can still note that during the evaluation, most of the participants spontaneously mentioned the richness of the discussions, due to a diversity of ages, living conditions, and personal experiences.

The practical sequence of events

Concretely, the panelists met during three days: during a first (residential) weekend, which took place in Bierges on the 23rd and 24th of October, and then on Saturday 27th of November, in Louvain-la-Neuve.

a) The first session of the panel

The first weekend was dedicated to the appropriation of the needs framework and to answering mainly two questions:
- How is wellbeing determined in our society? The objective was to think about the possibilities of well-(or ill-)being generated by our social organization, our institutions, our policies and public services, etc. rather than to adopt an individual, personal point of view
- What are the tangible signals on which one can lean upon in order to evaluate a given situation, or in order to judge the positive or negative character of the evolution of this given situation in time?

The work during this first weekend was structured according to

- The 9 needs (as described upper) + 1 more need, proposed by one panelist (and "validated" by the entire group): the need of fairness;
- 3 spheres of life: the professional sphere; the personal/private sphere; and the public sphere;
- 3 ages of life: adulthood; childhood/youth and old age.

The participants were first asked to make a two rounds vote in order to identify the 5 needs adult people wanted first to satisfy for the three spheres of existence or, in other words, first as workers, then as private persons and finally as citizens. The question was not "Which ones of the 10 needs do YOU want to satisfy first as worker, private person and citizen?" but "Which ones of the 10 needs do you think Belgian/Walloon people want to satisfy as workers, private persons, and citizens?" Each participant was then invited to allocate his/her votes between the 10 needs. After discussing together the outcome of this first round of votes, the participants were distributed in small groups and invited to plead in favour of one of the needs which didn't appear in the first four in terms of number of votes. After having heard all the pleading, the participants were invited to express a second vote. As TABLE XIX shows, the results of this second, more reflective round were quite different from those of the first, pre-reflective one.

Table XIX. Number of votes allocated to each need, for each sphere of life (adulthood).

	Professional life		Private life		Public life		Total For the 2nd vote
	1st vote	2nd vote	1st vote	2nd vote	1st vote	2nd vote	
Subsistence	18	**18**	2	**1**	6	**2**	**21**
Protection	10	**8**	10	**11**	11	**11**	**30**
Affection	4	**3**	15	**16**	0	**0**	**19**
Understanding	3	**2**	9	**5**	11	**8**	**15**
Participation	7	**13**	3	**2**	11	**14**	**29**
Idleness	13	**5**	11	**12**	0	**0**	**17**
Creation	1	**6**	6	**7**	5	**3**	**16**
Identity	6	**11**	9	**11**	8	**16**	**38**
Freedom and autonomy	11	**9**	9	**12**	15	**11**	**32**
Fairness	3	**1**	0	**0**	6	**11**	**12**

For each sphere of life, the 4 (or sometimes 5) needs having gathered the most votes after the second round were discussed in detail by the panelists (in subgroups).

If most of the reflection was devoted to the adult age of the life, the participants were also asked, at the end of the weekend, to think about the relative importance of the needs for two specific categories of people: the children and young people on the one hand, and the elderly people on the other hand. It appeared that both those ages were seen as ages of “fragility”, where the need of protection was thus fundamental. Concerning the old age, the other needs emphasized by the panelists were: the need of participation (having the possibility to find oneself useful through one’s activities), the need of freedom (still having the possibility to feel oneself independent, being mobile (thanks to the accessibility of public transports and, at home, and through equipping the life places), the need of subsistence (old people are often more vulnerable) and affection. As for the youth, the first needs to take into account when considering their wellbeing, were, for the panelists, the needs of identity, freedom, affection, understanding and creativity.

At the end of this first session of the panel, we thus ended up with a few tables, each of them showing, for each age of the life,

- the 4 of 5 most important needs to take into account while measuring the wellbeing of society in the three spheres of life of an adult;
- The most important needs to take into account while measuring the wellbeing of two specific populations: the children/young people and the elderly people.
- the different themes associated to those needs,

- and, for each of these themes, some propositions of indicators, or at least, some tracks about the way of measuring the satisfaction of those needs.

b) Between the two panels

While preparing the second session of the panel, we re-worked those different tables, in order to build one single table. This process was made according to different steps:

- The 3 spheres of life were first translated into 9 (more operational) domains (the same as used in the focus groups), which were finally reframed through 5 themes: Work/income; family/friends; life environment; public services and political life/society. Those 5 themes are the columns of the matrix.
- The 10 needs remained unchanged. Two of them were just renamed in order to avoid ambiguity or misunderstandings: ("understanding" became "competence", and "subsistence" became "material and physical welfare"). The 10 needs are the lines of the matrix.
- As for the content of the matrix: we tried to populate the matrix with already existing indicators, i.e., indicators for which measures (data) were already available in official statistics.
    - Amongst the indicators that had been proposed by the panelists, we selected the ones which were the most easily available;
    - In some cases, we could rely on a "logic" proposed by the panelists and try to translate it into concrete indicators.
    - In other cases, when a cell had remained empty because it was related to a need that had not been considered as one of the most important one by the panelists, and had thus not been discussed during the first weekend, we proposed ourselves some indicators (relying on our own knowledge)
    - Finally, at the end of this work, some cells remained empty. This doesn't mean they were not considered as important, but only that we couldn't find relevant indicator to fill them.

c) The second session of the panel

The second session of the panel was dedicated to:

- the presentation of the matrix by the researchers and the validation by the panellists;
- the weighting of the lines and columns of the matrix, in order to get weightings for each cell.

A third vote concerning the relative importance of the needs was then undertaken during this last day of discussion, this time taking account of the proposed indicators in the matrix. The vote took place in three steps: first on a purely individual basis, second after discussion of the individual votes in subgroups, finally in a general discussion of all participants.

Tables 20 and 21 show the outcome of this exercise concerning the needs. (NB: 10 stands for the higher ranking and 1 the lowest). TABLE XX shows the results after discussion in subgroups, TABLE XXI after discussion with the whole group.

Table XX. Ranking of the needs after discussion in subgroups

Need	Identity	Protection	participation	Freedom and	Subsistence	Equity	Understanding	Affection	Idleness	Creation
Group 1	4	2	3	5	1	8	6	7	1	10
Group 2	10	7	2	6	9	5	8	4	3	1
Group 3	9	4	2	5	10	6	7	1	8	3
Group 4	9	10	3	5	7	2	6	8	1	4
Group 5	10	9	5	6	8	7	4	3	1	2
AVERAGE	**8,4**	**6,4**	**3**	**5,4**	**7**	**5,6**	**6,2**	**4,6**	**2,8**	**4**
RANKING	**10**	**9**	**2**	**5**	**8**	**6**	**7**	**4**	**1**	**3**

Table XXI. Ranking of the needs after discussion in plenary session.

	Identity	Protection	participation	Freedom and	Subsistence	Equity	Understanding	Affection	Idleness	Creation
Global ranking	**9**	**8**	**4**	**6**	**10**	**5**	**7**	**2**	**3**	**1**

The same exercise was applied to the columns of the matrix, i.e., the spheres of life. Finally, by crossing the weights in lines and the weights in columns, we ended up with a weighting for each cell. In TABLE XXII, the cells in dark grey represent the 10 cells with the highest weights. The cells in light grey are the 5 following cells in terms of weight. Finally, the 5 cells with the lowest weight are the hatched ones.

Table XXII. Final weightings

	WORK/INCOME	FAMILY,FRIENDS	LIVING ENV.	PUBLIC SERVICES	POL/SOC LIFE	WEIGHTS NEEDS
IDENTITY	0,90	0,36	0,72	0,54	0,18	9
PROTECTION	0,80	0,32	0,64	0,48	0,16	8
PARTICIPATION	0,40	0,16	0,32	0,24	0,08	4
FREEDOM/AUTONOMY	0,60	0,24	0,48	0,36	0,12	6
SUBSISTENCE	1,00	0,40	0,80	0,60	0,20	10
EQUITY	0,50	0,20	0,40	0,30	0,10	5
UNDERSTANDING-COMPETENCE	0,70	0,28	0,56	0,42	0,14	7
AFFECTION	0,20	0,08	0,16	0,12	0,04	2
IDLENESS	0,30	0,12	0,24	0,18	0,06	3
CREATIVITY	0,10	0,04	0,08	0,06	0,02	1
WEIGHTS SPHERES	5	2	4	3	1	

2.4.3. CONCLUSIONS ON THE PANEL

2.4.3.1. Conclusions on needs

First of all, what we can surely say is that the needs theory and the needs language were proved to be a very good entry point for such an exercise. The panelists expressed themselves their satisfaction about this perspective: they could easily understand what each need referred to, and the fact of thinking systematically in terms of needs gave them an impression of exhaustiveness, while treating a subject as complex and multidimensional as the wellbeing of a society.
In what follows, we briefly comment the results of the whole exercise, need by need.

a) Identity
Identity was the need that individuals ranked higher before the subgroups and general discussions during the last vote. It was also one of the two needs (with the need for freedom and autonomy) that participants ranked in the top four in the three spheres of life during the first meeting. It came also as the most important need people expect to satisfy in the public sphere. However, identity as discussed by the participants has a double dimension: collective and personal. The collective dimension is more of a community-based character than of a social class or working group one. At the collective level, the references are to local, regional and national identities. The current institutional context of Belgium has probably influenced the debate but the fact is that the participants showed a high level of anxiety with respect to the future of their identity as a citizen.
What was clearly apparent is that the status identity linked not so long time ago to the role of worker, the position in the social division of labour has almost totally vanished. What is expected from the working life is not so much to provide for a collective identity but first to respect and recognize the personal, individual identity. This helps explaining why the need for identity comes only in third position in the ranking of

needs people want to satisfy through the working life. Except for the public life that cares for the collective identity, it is mainly in the family and private life that personal identity can flourish and, a bit surprisingly, divorce is explained by the participants by a lack of respect for one or the two partners' identities. In sum, identity is above all personal, self-identity and institutions as well as social relationships are evaluated on basis of the ability to respect and foster the expression of this self-identity. The accent is therefore on diversity: diversity of careers, jobs, competences and even forms of sexual partnerships and households.

b) Freedom-autonomy

Like identity, freedom and autonomy had been ranked in the top four for the three spheres of life during the first week-end but end up eventually at a middle rank (fifth position) after the last ranking exercise. The difference can be explained by a slight difference in the instruction given before the ranking. During the first weekend, the question was: "Which need do you think Belgian people want first to satisfy in their working private and public life?". Before the last ranking workshop, the question was instead "Where (at what need) do you think we should look first in order to assess Belgian people wellbeing?". It is likely that this last instruction directed the attention of the participants not to the most important needs for wellbeing but to the more problematic ones. It seems that there is no particular problem with freedom or autonomy in the Belgian society, contrarily to what happens with material welfare or identity. Indeed, if freedom and autonomy are to be thwarted at all, it would probably be the case in the working life where constraints of coordination and productivity are often invoked to justify restrictions in the spheres of autonomy of workers. However, the office or the factory have not been considered by participants as a place where freedom and autonomy could be at stake but as general means to gain freedom and autonomy in life in general through the earnings they secure. Furthermore, some have criticized the fact that working (i.e. the status of worker) had become a prerequisite for access to financial independence and, therefore, to real freedom.

However, if freedom and autonomy have not been considered a problem for adults once the financial independence is guaranteed, the situation has been characterized as totally different for children and, mostly, for the aged. The lack of autonomy, both at the physical level (for instance, in terms of mobility) and at the social and economical level ("staying master of one's existence") of many elderly has been emphasized.

c) Protection

The need for protection and security is the third in the final ranking, a rank it occupied already at the end of the first workshop. It has not been discussed in relation to the working life but only in the private and public realm. The number and diversity of indicators suggested by the participants testify for the importance of the need for protection in our society. The indicators referred to social security, the importance of private and public insurance schemes, alarm systems installed at home, street video-surveying, protection of infancy and childhood, environmental hazards, etc. In parallel with the strengthening of the need for protection, the impatience with respect to what appear as failures of the various systems of protection (hooliganism, intra-family violence, traffic casualties, growth of the inmate population, etc.) is growing.

In particular, as for freedom and autonomy, participants emphasized the special needs for protection of children and also the elderly, two especially vulnerable populations.

d) Participation

The last one in the top 4 of the first workshop, the need for participation ended at the seventh place during the last workshop. This is somewhat paradoxical because in the same time the participants were saying how much they appreciated participating in this citizen's panel and contributing to the definition of wellbeing indicators. Maybe the last decision has been influenced by the lack of indicators of participation in the public sphere in the tentative list built between the two workshops by the researchers. This list was supposed to help participants emit their final vote and most indicators of participation concerned the private and working spheres. It is therefore possible that the participants overlooked the role the state and other public institutions can play in fostering participation not only in public affairs (from the local to the national level) but also in the working place (for instance through the employment legislation). Actually, during the first workshop they had bemoaned the lack of participation in the public sphere, at the higher institutional levels.

The discussion on participation led to distinguish between participation in the working sphere (co-decisions instances, role of trade unions and representatives of workers) and participating through the working sphere to the collective effort of creating wealth and welfare. The need for participation hasn't been thoroughly discussed in the private domain but the many opportunities offered by our society for participating in sportive, cultural or humanitarian activities and associations. As for autonomy and protection, the importance of participation for the elderly has been noted.

Concerning participation, a discussion occurred on the difference of the individual and the collective point of view, some participants arguing that participation could well be secondary for the wellbeing of individuals but crucial for the society as a whole: a healthy society being a society with high participation levels.

e) Subsistence

Though it was ranked fifth during the first workshop, it eventually ended at the pole position, after having be renamed “material and physical wellbeing”. By subsistence, participants meant mainly income, wealth and standard of living. It is only later that health was taken in consideration. This came as a surprise since health had been especially highlighted during the focus groups.

It is at the occasion of the discussion of subsistence that it became clear that we were facing two different kinds of indicators with respect to needs: indicators of satisfaction and indicators of importance. Amongst the former were mentioned: indebtedness, poverty, begging, food aid, etc. Amongst the latter: lotteries, moonlighting, etc.

The discussion on consumption has emphasized the risk of over-consumption, especially of food and drinks which was likely to harm health and, finally, subsistence.

f) Understanding

The importance of the need for understanding and of education therefore has been only gradually acknowledged excepted for children and youth. However, for adults it has been mainly linked with consumption and health care. Participants felt they were lacking the necessary competence for understanding food labels and indications and avoid the traps of ads and marketing. The need for better understanding has also been evoked with respect to our, admittedly quite complicate, political institutions.

g) Affection

The need for affection has been confined to the private sphere (which included neighbourhood) where it ranks at the higher position, followed by idleness-leisure and freedom-autonomy *ex aequo*, then by identity and protection. The wish to secure the private life from the interventions of governments or public administrations is responsible for the low priority given to affection in the final ranking. However, here again the special situation of children and of the elderly for whom affection is either crucial either too often lacking, should not be overlooked. It is not sure that we can consider the affective conditions of the aged as something purely private into which no public administration should have a say. It should be possible, for instance, through careful and adequate urban and city planning, to make easier for the elderly to keep in touch with relatives and to live a socially more active life.

For adults, the fact that participants wanted to keep the private and family life safe from the intrusion of administrations and governments should not be understood as a minimization of the need for affection in wellbeing. Quite the contrarily: there was a wide consensus on its crucial importance.

h) Idleness-leisure, creation and equity

Though equity had been added to the list of needs following a demand of participants, it has not been the object of much discussion. It has been quickly evoked with reference to gender inequalities in housekeeping and careers opportunities and with respect to discrimination in public offices. As for creation, it has probably suffered from the very instrumental conception of a job simply as a prerequisite for earnings and social security. Leisure, rest and idleness were also praised as a part of what we are working for but it doesn't seemed necessary to give it much attention when assessing wellbeing.

i) Synthesis

Finally, four needs are emerging from the whole process: material and physical welfare, identity, protection-security and competence. Because they are those whose satisfaction is the most important for wellbeing? Not sure. As already mentioned, affection, family life and friendship have been given highest priority by almost all participants. Leisure, rest and idleness have also been highly praised.

Our hypothesis is that another criterion has driven the ranking. It is not the importance for wellbeing that mattered but the character more or less uncertain, problematic of the need in modernity in general and the Belgian society in particular. Neither affection or leisure, participation or social justice, seem very problematic in our modern societies. On the contrary, these are perhaps the needs the satisfaction of which has been the more enhanced since the beginning of the modern era. Indeed, in the traditional society and during the early phases of modernity ("the bourgeois society"), marriage was largely independent of affection and the romantic love was more the exception than the rule; leisure and idleness were the privilege of the nobility or high bourgeoisie (remember Veblen's leisure class) and there was no limit to the working time for others; life chances were almost totally dependent on the random circumstances of birth and the vast majority of the population was excluded from participation in the decisions and management of the public sphere. It is not to say that there is no "leisure class" anymore or that the late-modernity societies are perfectly just or totally open but it is undeniable that achievements in terms of equity, participation, affection and leisure have greatly improved since Second World War. However, what almost all observers of the late modernity highlight is that self-identity, and security (at any rate, the feeling of security) are much more uncertain and problematic than before. On one hand, identity has become a central theme of research for sociologists as testifies the recent blossoming of books on self-identity (Giddens 1991, Ehrenberg 1995, Kaufmann 2004, Dubar 2000, Martucelli 2002, etc.); on the other hand, risk has become a central concern (Beck 1992) as if we were living under the permanent thread of food scares (BSE, etc.) environmental risks (climate change, pollutions), terrorism, financial crisis, worldwide epidemics

(HIV, H1N1 influenza). Competence also is never definitively acquired since the rapid development of technologies makes them day after day quicker obsolete. As for our material welfare it has not improved significantly since the seventies (at least it has stopped benefitting from the growth of GDP) while the very basis of our material welfare, employment, has become precarious with expanding globalization and the succession of systemic financial crisis.

2.4.3.2. Conclusions about indicators

The discussions during the first session of the panel brought our attention to two elements we hadn't expected as such beforehand, and which made our research for indicators more complex.

- First of all, we noticed that the discussion by spheres of life brought the participants to think about indicators in two different directions. Some of them thought about the satisfaction of the needs IN the sphere at stake (for example, the satisfaction of the need for physical and material wellbeing IN the work sphere, with indicators such as the wellness at work, in terms of places, luminosity, ergonomics, etc.) whilst other ones thought about the satisfaction of the needs THROUGH the sphere (to take our example back, the satisfaction for subsistence through the work sphere, with indicators more linked to earnings). When trying to fill the matrix with indicators in the meantime between the two workshops, we tried to keep this distinction IN/THROUGH and to apply it systematically to each cell. Our first aim was even to select only two indicators per cell, one for the IN dimension, another for the THROUGH dimension. Unfortunately, this distinction was sometimes completely blurred, and very difficult to apply. Nonetheless, we thought it would be interesting to keep it in mind, and to work further on it.
- Another kind of distinction appeared when we analyzed the results of the first workshop: indeed, we noticed that amongst the indicators proposed by the panelists, some of them concerned the level of satisfaction of the need, and others the level of importance of this need for the wellbeing of the Walloon Region's population. Those indicators give in fact two different kinds of information. The indicators that can be found in the final matrix are only satisfaction indicators. WE eventually decided not to include the "importance indicators" since we didn't have time enough to find such indicators for each sphere of life, and each need. Nonetheless, we think it would be a very good track for a further work. This kind of indicators could back a reflection on the weightings of the lines, columns and cells. It could be very interesting to observe the evolution of those indicators through the time: we could for

example observe that a need is more and more satisfied, whilst it appears to be less and less important for the population…

2.4.3.3. Conclusions about the process

All in all, we are rather satisfied with the results brought by the panel. Those are still fresh, and it is quite difficult to already get a whole picture of what are the pro and cons of leading such a process in the perspective of building an indicator of wellbeing. Let's not forget that the project WellBeBe is a research project, and the citizens' panel was no more than an explorative experience, aiming at "tasting" (and "testing") what could be done in terms of participatory approaches around such a topic.

For the moment, we can only draw some conclusions about the process in itself, and try to determine, if it was to be done again, what we would change:

1. First of all, we would probably be more cautious about the constitution of the panel. As said upper, even if the panelists themselves were quite happy with the diversity of life experiences amongst the panel, we would have been interested in having more people working in the profit sector, for example. The panel we had was perhaps too "homogeneous" in terms of values, life styles, etc. If it appear impossible to have a more diversified panel (for the reasons evoked above), we would then probably take care, in the animation, to try emphasizing the points of disagreements, in order to foster more debates and lively discussions.
2. Secondly, the process would have probably gained by being longer. Indeed, the topic was very complex, and it needed some time to get in it, for the participants as for the researchers. We could easily have spent more time on delivering information to the participants, on indicators in general, alternative indicators in particular, theories of wellbeing, and especially needs theory. This information was available for the participants in the form of information sheets, but few of them really took the time to read them. Instead of 3 days of panel, we could easily have proposed at least 4 days. Also, we could have let a longer time between the two panels, in order to give more time to the panelists to "ruminate" what had been discussed during the first session (and we would thus have spent more time at the beginning of the second session to discuss about this "rumination"), and more time for the researchers to integrate and elaborate on the results of the first session. Finally, the whole process could have been longer in the sense that keeping discussing with the panelists would be precious, even after the building of the indicator as such, once the data gathered and the first quantitative outcomes gathered.

3. Thirdly, we could have relied more on the real individual life experiences of the panelists in order to enter the discussions, rather than making them directly think in terms of collective wellbeing. Indeed, we could notice that working on a sometimes high level of abstraction was quite difficult for some of the participants.
4. We could also have had the process (at least some questions) tested on beforehand, by a group of students, during a few hours, in order to gain time on some misunderstandings or ambiguities due to the formulation of the questions.

What we would keep is:

1. First, we noticed the importance of the quality of the animation. We have been very happy about the way Atanor worked with us, and with the panelists. A good animation and facilitation is certainly a key factor of the success of such an experience.
2. As said above, we would also certainly keep the entry point of the needs theory, and the language of the needs. This was very accurate, and facilitates a dialogue between researchers, citizens and policy makers.

2.4.4. MOVING FORWARD WITH THE RESULTS OF THE PANEL

The organization of a citizen panel gave us a lot of information concerning the different satisfiers of wellbeing people valued in the main life domains for the ten different needs. But an important work was still to be done in order to give life to these data and build an indicator of wellbeing that could be used by decision makers. One of the instructions given to the panelists in their discussions was to choose as far as possible existing (objective) indicators, that is to say indicators that were known to be collected at the regional or, by default, the national or the European level periodically. The idea was to build on existing data, to use available statistics and give them a new meaning by inserting them in a reflection around wellbeing. One of the benefits of this pragmatic positioning is a saving in work force and money. It has also the advantage of valuing statistics that are often under-used and not sufficiently spread among the civil society.

TABLE XXIII shows the final matrix on which we finally worked: it is the matrix we presented at the beginning of the second session of the panel, to which we integrated most of the comments (and suggestions of adds) made by the panelists in reaction to it. The different “colors” show the different weightings (in dark grey, the top 10, to which we add the light grey cells to get the top 15 of the highest weighted cells. The top 5 of the less weighted are the hatched cells).

Table XXIII. Final matrix: proposition of indicators and weights

	WORK-INCOMES	***FAMILY, FRIENDS***	***LIFE ENVIRONMENT***	***PUBLIC SERVICES***	***POLITICAL LIFE AND SOCIETY***
IDENTITY	Diversity of jobs and professions	Number of homosexual marriages and cohabitation Diversity of cultural, folkloric and sportive activities	Number of homeless people Access to social housing Households housing expenditures (acquisition and retrofitting)	Diversity of enrolment in formal education curriculum (Education) Correspondence between the working position and the diploma	Number of political parties Number of asylum seekers
PROTECTION	Number of accidents at work Victims of occupational disease Number of persons who turn to minimum support income	Number of children withdrawn from their families for their protection Number of elderly people abused	Pollution, grime or other environmental problems (% of population under SEVESO, floods…) Number of complaints to the environmental police Environmental diseases' incidence rate	Number of victims of roads and railway accidents Physicians or doctors	Number of offenses against property and persons Number of days without a fully competent government

PARTICIPATION	Trade union membership OR affiliation Employment rate	Number of persons taking part in voluntary activities	Number of members of environmental and/or heritage associations	Blood donors with respect to needs Number of first aid workers and number of voluntary firemen	Number of members of political parties Participation to local associations
FREEDOM, AUTONOMY	Average length of unemployment Mean or median discretionary income in Belgium as part of mean or median earnings	Number of severely indebted households	Accessibility of public transports (price, frequency, distance…)	Number of reported euthanasia	
SUBSISTENCE	Absenteeism for illness reasons Number of families living under the poverty line	Number of three generations households Number of unpaid maintenance allowance	Percentage of substandard housing Number of allergies (with environmental causes) Waste generation	Life expectancy in good health Household expenditure for health car Infant mortality	

			per household		
EQUITY	% of women with managerial or decision making responsibilities Gender income gap	GINI coefficient	Differential exposition to noise pollution Access to a healthy and nice environment for everybody	Inequalities of health in function of the education level/of incomes Independence between parents and children education level	Rate of non-native public representatives Average number of public mandates per representative Vote-catching
UNDERSTANDING/ COMPETENCE	Number of workers following a professional training paid by the employer	Number of pregnancies among teenagers	Attendance rate of trainings related to the environments (nature guides…)	Number of pupils with school difficulties illiteracy rate	Audience of political debates on TV Number of subscriptions to daily newspapers
AFFECTION	Quality of human relations in the workplace Complaints for harassment and violence in the workplace	Three generations households Number of host families and of adoptions	Number of members of NATAGORA, AVES, SPA (animal welfare associations		Level of liberalities (Télévie,…)

IDELNESS	Leisure time Number of workers compelled to accept flexible schedules Net rate of participation in holidays (number of people taking holidays for 100 inhabitants)	Number of single parents with professional activities	Presence of green spaces in the surrounding Train delays and traffic jams	Access to sport facilities Access to cultural facilities (theaters, cinema…)	
CREATIVITY	Perception of workers regarding their opportunity to be creative at work	Creativity in family activities Number of participants to local exchange systems (LETS)	Expenditures for housing embellishment and gardening Innovation in renewable energies and ecological materials	Number of art schools and conservatories Public subsidies allocated to culture	

2.4.4.1. Objectives and proceedings

For each indicator in the matrix, we thus collected statistics for two years of reference (2000 and 2007). The objective was to express in percentages the evolution of the data during this period. Our main sources of information were administrative statistics from public offices in Wallonia, Belgium and Europe (IWEPS, INS, EUROSTAT, BELGOSTAT…) but we also found statistics in specialized sectors such as the federal police, reports of evaluation committees, Infrabel… (see the sources in the matrix in the annex). The statistics available for the different cells of the matrix were then weighted according to the weight given by the panelists during the last day of the panel (see TABLE XXII). However, the weights were normalized in order to take into account the lack of data in some cells (see TABLE XXIV). The sum of all the cells can thus be interpreted as percentage of negative or positive evolution of the wellbeing in Wallonia.

The normalization is done in two stages: first all the original weights (one by cell) are divided by their sum total (16,5) so that they are all in the 0-1 interval and add up to 1. However, not all cells contain information, some are empty because we didn't find relevant indicators for them or because the data were unavailable. Therefore, a second normalization has to take place. It consists of summing all the normalized weights for which data exists and then dividing them by this value. The sum of the weights for which data exist (non empty cells) has an interesting property: it expresses the level of completeness of the scoreboard. Thus, if all cells contained information it would be equal to 1. In our case, because the scoreboard is incomplete, its value is 0,781 meaning that our actual information weights only 78% of the complete scoreboard.

TABLE XXIV shows the outcome of this second normalization

Table XXIV. Normalized weights for indicators taking account of empty cells

	WORK-INCOMES	FAMILY, FRIENDS	LIVING ENVIRONMENT	PUBLIC SERVICES	POLITICAL LIFE AND SOCIETY	WEIGHT PER NEED
IDENTITY	0,069875776	0,027950311	0,055900621	0	0,013975155	0,168
PROTECTION	0,062111801	0,02484472	0,049689441	0,037267081	0,01242236	0,186
PARTICIPATION	0,031055901	0	0,02484472	0,01863354	0,00621118	0,081
FREEDOM, AUTONOMY	0,046583851	0,01863354	0,037267081	0,027950311	0	0,130
SUBSISTENCE	0,077639752	0	0,062111801	0,046583851	0	0,186
EQUITY	0,038819876	0,01552795	0	0	0	0,054
UNDERSTANDING	0,054347826	0,02173913	0	0,032608696	0	0,109
AFFECTION	0	0,00621118	0	0	0,00310559	0,009
IDELNESS	0,023291925	0,00931677	0,01863354	0,013975155	0	0,065
CREATIVITY	0	0	0,00621118	0,004658385	0	0,011
TOTAL	0,403726708	0,124223602	0,254658385	0,181677019	0,035714286	1,000

The indicator presented here is surely a work in progress. Its main objective is to suggest a way forward in the building of theoretically sound and democratically legitimate indicators of wellbeing in Belgium. Our proceeding in the calculation of the indicator was deliberately quite simple in order to be easily understood by the civil society. In our view, the participation of the citizens should not be limited to the creation of the indicator: they also have to be integrated in the discussions concerning its evolution. The results need to be largely debated and confronted to the comments of experts in the different life domains.

2.4.4.2. Limits encountered

The results we obtained have to be taken with tweezers. We are indeed conscious of the limits of this exploratory exercise.

First of all, some cells are empty (see cells in blue in the matrix). It can be explained by two different reasons. On the one hand, some were already left incomplete in the original matrix because they are no indicators corresponding to them. For instance, there is no satisfier for the need of idleness in the public sphere. Generally speaking, these cells were considered unimportant by the panelists. However, on the other hand, some cells were left empty as we could not find the data corresponding to the indicator mentioned by the participants (or any statistics that could be used as a proxy to express their idea). This lack of data is sometimes due to our lack of expertise in the domain (we could not find the statistics concerning complains for sexual abuses and violence in the working place, for instance). It is also sometimes the result of the nonexistence of statistics concerning the information (to our knowledge, there is no statistics concerning the number of allergies due to environmental causes or the number of elderly people victims of abuses, for instance). This type of work can thus also be useful to guide new kinds of statistics collection.

Secondly, we had some difficulties in finding accurate data for some cells. The two main problems were the periodicity and the geographic scale. Indeed all the statistics were not always available for the two years of reference we had chosen (2000 and 2007). Unfortunately, all the data are not collected each year and some interesting statistics are coming from one shot surveys. Moreover, in some cases, the data are only collected at the national level and thus not available for the Walloon region only.

As a consequence of these limits, the statistics we use to build our indicator of wellbeing in Wallonia are not always the most relevant. Some data were also used as proxy and do not totally reflect the thoughts of the panelists. In our view, the main limitation is when the data used to represent a cell highly weighted by the panelists is not sufficiently sound (the cell “understanding/work and income” where we use the rate of participation at continuous training among the 25-64 as a proxy for the

number of workers following a training paid by their employer, for instance) or completely empty (the cell “identity/public services” left empty even though it was classified in the top ten by the panelists, for instance).

2.4.4.3. Analysis of the results

Table XXV. Weighted rates of change of indicators of need satisfaction in Wallonia in 2007 with.respect to 2000

	WORK-INCOMES	FAMILY, FRIENDS	LIVING ENVIRONMENT	PUBLIC SERVICES	POLITICAL LIFE AND SOCIETY	Total in lines	
IDENTITY	*-0,0014*	**0,0072**	*-0,0124*		**0,0111**	**0,0045**	-0,0633
PROTECTION	*-0,0012*	*-0,0020*	*-0,0798*	**0,0010**	**0,0029**	*-0,0792*	1,1057
PARTICIPATION	**0,0031**		**0,0062**	**0,0009**	*-0,0003*	**0,0100**	-0,1390
FREEDOM, AUTONOMY	**0,0008**	*-0,0633*	**0,0010**	**0,0276**		*-0,0339*	0,4727
SUBSISTENCE	*-0,0086*		*-0,0048*	**0,0012**		*-0,0122*	0,1707
EQUITY	*0,0000*	*-0,0032*				*-0,0032*	0,0447
UNDERSTANDING	**0,0071**	*-0,0023*		**0,0142**		**0,0190**	-0,2647
AFFECTION		**0,0170**			**0,0002**	**0,0173**	-0,2411
IDELNESS	**0,0067**	*-0,0004*	*-0,0006*	*-0,0009*		**0,0048**	-0,0673
CREATIVITY			**0,0009**	**0,0004**		**0,0013**	-0,0184
Total in columns	**0,0065**	*-0,0469*	*-0,0894*	**0,0444**	**0,0139**	*-0,0716*	
	-0,0901	0,6552	1,2485	-0,6194	-0,1942		

The interpretation that can be made of the matrix above is fourfold. First of all, you can concentrate on each weighted cells and compare the evolution of the different indicators that they contain. Secondly, you can read the results by lines (the sum of the weighted cells in line) and study the satisfaction of the different needs. A third possibility is to compare the different life domains (the sum of the weighted cells in column). Finally, you can analyze the value of the indicator as a whole (the sum of all the weighted cells) and see how much each needs and life domains contribute to its evolution. This final number can be understood as a percentage of progression or regression of the wellbeing satisfaction in Wallonia.

Generally speaking, our analysis tends to show that the evolution of wellbeing in Wallonia between 2000 and 2007 is rather negative with a decrease of 7%. Of course, this conclusion should not be taken for granted as it is a work in progress and some of the data collected can be criticized.

A look at the column of the total per needs leads to the conclusion that the diminution of the satisfaction of the protection’s need contributes the most at this negative evolution (-0,079). It is mainly due to the negative impact on the living environment (-0,0797, with the rise of the number of complaints to the environmental police during this period) as well as negative tendencies in the domains of work-income (increase of the number of persons who turn to minimum support income and of the victims of occupational diseases) and family-friends (increase of the number of children withdrawn from their families for their protection). According to our study, other needs’ satisfaction have also evolved negatively between 2000 and 2007 such as freedom and autonomy (-0,034 due mainly to the impressive increase of severely

indebted households), subsistence (-0,012, because of the rise of the number of families living under the poverty line and of the absenteeism for illness reasons) and equity (-0,0031, explained by the diminution of the GINI coefficient as well as the diminution of the percentage of women with managerial or decision making responsibilities). If our wellbeing indicator was not a work in progress, these evolutions should be taken very seriously by the decision makers as the needs mentioned are highly weighted by the citizens (in particular, the need of subsistence considered the most important by the panelists). However, as we have explained before, these needs might be highly weighted by the citizens because they consider they are not sufficiently satisfied in Wallonia. Let's also note that the satisfaction of most of the needs (6 amongst 10) has evolved positively between 2000 and 2007. The most significant progression is the satisfaction of the need of understanding (+ 0.189). It can be notably explained by the diminution of the number of persons with only a primary school diploma or no diploma at all used as a proxy for the illiteracy rate. Another progression interesting to underline is the one of the identity's need, as it is considered very important by the panelists (classified second in the top ten). The rise of the satisfaction of this need is mainly due to the increase of the number of homosexual marriages and cohabitation (cell “identity/family-friend”) and the decrease of the number of asylum seekers (cell “identity/political life-society).

What about the evolution of the life domains between 2000 and 2007? According to our indicator, the evolution of the living environment and the family-friends domains influence negatively the indicator while the satisfaction of wellbeing in the three other domains (work-income, public services and political life-society) is rather positive. Once more, the cells “protection/living environment” and “subsistence/living environment” presented in the previous paragraph seem to be the more responsible for the diminution of the satisfaction in the domain of the living environment. The positive evolution of the satisfaction of Walloon citizens towards public services can be explained by statistics as diverse as the increase of the number of reported euthanasia (view as an indicator of freedom and autonomy), the increase of public subsidies allocated to culture, the higher number of physicians or doctors by regions, the reduction of number of victims of roads accidents as well as the reduction of infant mortality.

In brief, the objective here was to show, through the analysis of our matrix, the type of interpretation that could be made of the evolution of wellbeing satisfaction in Wallonia. The main originality of this new tool is the multiplicity of its entries, the diversities of its possible focus. We do not only offer an aggregate number to measure the wellbeing satisfaction and we do not only focus on life domains (that are often matching with the different ministries in a government). The theoretical framework chosen leads us to suggest a transversal approach to wellbeing linked

with the satisfaction of different needs. Combining these three different entries could be very fruitful for the debates gathering citizens and political decision makers.

3. POLICY SUPPORT

Research should inform policy as much as possible. The complexity of the issue (of well-being and others) creates the danger that decisions are made on a not well-informed basis. For example, it has become popular to refer to happiness or satisfaction with life as a variable that should be important for policy. This implies that it is assumed to be a good aggregator of the multi-dimensional sphere of well-being. But, as Nobel-prize laureate A. Sen has written: “A person who is ill-fed, undernourished, unsheltered and ill can still be high up in the scale of happiness or desire-fulfillment if he or she has learned to have ‘realistic’ desires and to take pleasure in small mercies.” (Sen,1985:.22).

The choice for a certain well-being model in a multi-dimensional context, so the choice of a certain outcome-driver structure, already entails for some part the variables that will show up to be important for well-being. We consider this to be a policy relevant finding (that is documented in this project). Research should provide policy with results that show the sensitivity of the choice of considering a particular ‘outcome’-variable as a relevant well-being indicator. This research has made clear that, whatever model that is chosen, there are different variables that are influencing the outcome. Policy could choose to make targets for those variables that would also correct for adaptation to objectively bad life situations, or for the danger of expensive tastes.

Another implication for policy, related to this research, is the fact that the issue of weighting is not solved by choosing for a set of equal weights. Any choice on weights is a normative decision, also (even) when one thinks (mistakenly) to avoid it by choosing equal weights (or data driven-weights). Any system of weights that is not purely relying on the individual’s opinion is somehow ‘paternalistic’. But, at the same time, some paternalism is desirable if one wants to make the move from individual well-being to sustainable development. This requires that future and far away people also have a weight, which is not (sufficiently) the case when using a value system that is relying (only) on a personal (individual) opinion.

This is why weighting should be a democratic participatory process. The citizens’ panel that we organized constitutes precisely an experiment in a deliberative weighting process. We want to stress that it has not been just a scientific experiment. We took great care that it goes beyond a purely academic exercise first of all by respect for the citizens who sacrificed almost two week-ends in the process but also because we were impatient to make a contribution to actual policy. As the Walloon government has explicitly included in its long term strategy (“Plan Marshall 2.vert”) the adoption of indicators of wellbeing that go beyond GDP and the encouragement of new, deliberative participatory mechanisms, we thought it would be unforgivable

not to - at least try - to contribute practically to these objectives. Therefore, we negotiated with the Walloon government, on one hand, and with Belspo, on the other, the possibility to make a kind of joint venture around the citizens' panel application.

It is also the willingness to be as useful as possible to policy-making that has driven our attempt to translate as far as possible the needs-satisfiers matrix of indicators and weights into a credible (if not definitive) prototype of wellbeing scoreboard. As can be read in the next section, it is our intention, in the coming months and even years, to improve, maintain, update and disseminate it in order to foster a public debate on wellbeing and its measurement.

4. DISSEMINATION

The importance of dissemination and valorization of the conclusions and results cannot be underestimated. Not because we find them particularly outstanding but because the issue of defining and measuring wellbeing should be the object of debates and discussions in the larger possible number of social arenas, including the wider audience of mass media.

Of course, not every results of the project are likely to gain audience in the same arenas. The results of the capability-functioning survey are more likely to interest the scientific community involved, notably in the Human Capability and Development Association (of which two promoters are in fact members), in developing, operationalizing and the capability framework. On the other hand, the matrix of indicators (with their measure) which constitute the outcome of the participatory experiment is intended to be discussed more in policy and administrative arenas. At any rate, it is the intention of the coordinator to continue working with the matrix, trying to improve it, updating it with the last available data and communicate on it, including in the generalist media. The “Institut pour un Développement Durable” (IDD) is already renowned (and praised) for its short but numerous, sharp, timely and accessible presentations and discussions of various social, economic and environmental indicators in the main newspapers of Belgium. The index of multi-dimensional wellbeing we came to with the help of our panel of citizens will take a central place in the communication strategy of the IDD, because we are convinced that it corresponds to what policy-makers are expecting from scientists working on that topic and that it fits the constraints and requirements of large audience media and especially daily newspapers which are in demand of this kind of information.

However, it needs of course to be improved and this can be done only through vivid discussions with the statisticians experts in the different concerned domains and also with other colleagues from different disciplines: psychologists, sociologists, physicians, social workers, field economists, etc.

5. PUBLICATIONS

a) Peer Reviewed : published or in press

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b) Not peer reviewed.

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6. ACKNOWLEDGMENTS

The citizens' panel has benefitted from the political and financial support of the Walloon Government. We are grateful to the Minister of Scientific Research and Sustainable Development of the Walloon Government, Jean-Marc Nollet and to Marie-Carmen Bex for their help.
We owe also much to the animators Stephane Delberghe and Barbara de Radiguès from ***Atanor*** who made the panels' sessions a gratifying experience both from a human and from a substantive point of view.
Finally, we are glad to thanks all our Follow-Up Committee members, and especially Marc Van Heuckelom for their invaluable advices and their support.

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ANNEXES

The annexes are available on our website

http://www.belspo.be/belspo/ssd/science/pr_transversal_en.stm