

# Moving towards a General Definition of Public Happiness: A Grounded Theory Approach to the Recent Academic Research on Well-Being

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**Abstract**—Although there seems to be a growing interest in the study of the citizen's happiness as an alternative measure of a country's progress to GDP, happiness as a public concern is still an ambiguous concept, hard to define. Moreover, different notions are used indiscriminately to talk about the same thing. This investigation aims to determine the conceptions of happiness, well-being and quality of life that originate from the indexes that different governments and public institutions around the world have created to study them. Through the Scoping Review method, this study identifies the recent academic research in this field (a total of 267 documents between 2006 and 2016) from some of the most popular social sciences databases around the world, Web of Science, Scopus, JSTOR, Sage, EBSCO, IBSS and Google Scholar, and in Spain, ISOC and Dialnet. These 267 documents referenced 53 different indexes and researches. The Grounded Theory method has been applied to a sample of 13 indexes in order to identify the main categories they use to determine these three concepts. The results show that these are multi-dimensional concepts and similar indicators are used indistinctly to measure happiness, well-being and quality of life.

**Keywords**—Grounded theory, happiness, happiness index, quality of life, scoping review, well-being.

## I. INTRODUCTION

SINCE the notion of inalienable rights to life, freedom and happiness has come to underpin many constitutions and human rights declarations around the world, happiness has become a crucial idea not only in political discourse, but also in government policies [1]. For instance, the Government of Bhutan created the Gross National Happiness index in order to measure the progress of the country in an alternative way to GDP [2], the Dutch Government's Social and Cultural Planning Office created the Life Conditions Index [3], and more recently, the United Kingdom's government also created a program to measure national well-being [4].

There are also several organizations around the world that have created researches and reports which study nations' happiness, such as the United Nations [5], the New Economics Foundation [6], the Gallup World Poll [7], the European Foundation for the Improvement of Living and Working Conditions [8], the Global Hub for the Common Good [9], the Organization for Economic Cooperation and Development (OECD) [10], the Eurostat [11], the Turkish Statistical

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Institute [12], the Eurobarometer (from the European Commission) [13] and the Australian Centre on Quality of life [14], among others. Nevertheless, happiness as a public concern is an issue that preoccupied human beings long before the recent growth of interest in this area on the part of public institutions and policy makers.

It has been a recurrent subject in literature, poetry, philosophy, religion and political ideologies from all historical periods, and it has been studied in many different disciplines, such as ethics, theology, political science, economy, epidemiology, medicine, statistics, sociology, management and psychology [15], [16]. In [17], Haidt establishes that there are ten ideas about happiness in modern scientific research that comes from ancient wisdom. Reference [18] claims that in Western societies' notions of happiness come from Ancient Greece and have been changing with the course of history and history of ideas. In fact, [19] sets up three key periods in which happiness theory has undergone major development: Ancient Greek philosophy, West-European post-enlightenment moral philosophy (Utilitarianism), and contemporary quality of life research in wealthy Western countries. Even so, over time the many authors who have tried to define happiness have encountered several problems [19]-[21]. The reason for this is that it is a concept with a variety of meanings and uses in common language [19], [21], across cultures [22] and between disciplines [15], and therefore designating it involves an ideological debate about how to prioritize the values that shape its meaning: "defining happiness is then propagating an ideology" [19, p. 8]. Moreover, the notions happiness, well-being, quality of life, good life, or *eudaimonia* are used indistinctly [23], which makes the job of defining these concepts even more arduous.

Positive psychology focuses on the study of subjective happiness in order to escape from this ontological discussion. Through self-appraisals, researchers can acquire quantitative data about happiness and see the correlations it has with different social issues and values, so well-being becomes an empirical object of study [21], [24].

These studies have focused on the relationship between subjective happiness and factors such as income, age, marital status, social participation or positive feelings. Nevertheless, a theoretical framework which unifies all of those findings is needed [21].

In order to meet this theoretical challenge, this investigation analyses the main indexes that measure three concepts that are different but similar: happiness, well-being and quality of life.

Governmental and institutional indexes have been chosen because they represent something that can be applied by policymakers, so the object of study moves from a theoretical debate to a pragmatic one. After performing this analysis, the investigation determines the different factors that shape these concepts and compares them in order to identify issues on which they coincide. There is also an evaluative discussion about whether it is possible to move towards a general definition of public happiness or if that is ultimately a chimera.

## II. LITERATURE REVIEW

As it was noted above, happiness is a hard concept to define due to the multiple meanings it takes on and the different words that are used to talk about it.

When talking about quality of life, [23] established that it becomes multidimensional when it is scientifically analysed, because the diverse qualities of life are different and imply different things. These qualities are: Liveability of environment, Life-ability of the person, Utility of life and Appreciation of life. Every dimension contains different aspects and measures.

Reference [25] understands well-being as a dynamic process, where the different indicators to study it can be organized in different stages: Anticipation, Planning, Behaviour, Outcome, Experience and Evaluation. Taking this into account, policy makers should use one well-being indicator or another depending on what they want to achieve and the concrete policy that is selected to achieve it.

Reference [26] proposes an "Onion theory of happiness", where happiness is shaped by three psychological layers: an inner biological-based layer referred to as "Will to live", an intermediary layer of well-being, and an external layer of "domain satisfactions" influenced by external circumstances. These domain satisfactions are cross-cultural and related to items such as children, family life, friends, health, work or occupation, accomplishments, housing, goods or services, state of the country and financial situation. As discussed, these factors have been identified when talking about Positive psychology. On the same line of thought, [27, p. 190] said:

*"It is clear that there are multiple components that combine in complex ways, and that no single one of them reflects 'true happiness'. Instead, subjective well-being must be studied as a multi-faceted phenomenon".*

Although Subjective well-being (SWB) is a term which implies an individual judgement about one's life, it is also used as a synonym for happiness and is shaped by four components: Pleasant emotions, Unpleasant emotions, Global life judgements and Domain satisfactions. These Domain satisfactions reflect "a person's evaluation of specific domains in his or her life" [27, p. 198], and again comprehend dimensions like marriage, work, health and leisure.

Through a literature review, [16] identified that although happiness, objective well-being, subjective well-being, quality of life and life Satisfaction are concepts with different meanings, they all come from the same origin and are all highly associated to certain domains: locus of control, absence

of inner conflicts, good social relationships, involvement with goal-directed work and leisure activities, good health, friends, satisfaction with family life and marriage.

Using the same method, [28] said that what is known about well-being is that it is correlated with domains like income, social relationships, (subjective) health, job satisfaction, leisure time, religion and personality.

Reference [29], following Wilson's contributions, reviewed what is known about happiness and identified personality, income, marriage, religion and subjective health as high-correlated subjects with happiness.

Reference [22] did another review of the literature and talked about different happiness drivers that could be promoted by policymakers and that are important to all individuals across cultures:

*"In spite of the same semantic heterogeneity of the concept of happiness, of the different cultural backgrounds affecting the way individuals answer to these questions, we observe almost everywhere the same impact of income, health, wealth, unemployment and marital status" [22, p. 114].*

From a study of governments and policymakers at an international scale, [15] summarised what has been said in happiness literature and concluded that many data about well-being coincide across different countries around the world. In general, happy people "are disproportionately the young and old (not middle-aged), rich, educated, married, in work, healthy, exercise-takers, with high fruit-and-vegetables diets, and slim" and "happy countries are disproportionately rich, educated, democratic, trusting and low-unemployment" [15, p. 25].

Reference [15] also gathers results of other investigations, like the one of Diener et al., in which identifies that happy countries have: low inequality, high social capital and strong friendship networks, low unemployment and inflation, high levels of democracy and democratic participation, high trust, strong welfare states and public spending, and low pollution. Bjornskov et al., also cited in [15], identified four groups of potential happiness determinants: political, economic, institutional, and human development and culture. Finally, in [15], one could see that DiTella and McCulloch established that happiness is positively correlated with a country's income, welfare state and lifespan, and negatively correlated with number of working hours, environmental degradation, crime, openness to trade, inflation and unemployment.

As seen in this literature review, there are many life domains which are correlated to happiness and that coincide across investigations around the world. Nevertheless, the data about happiness and the concepts used as its synonyms are scattered, and it seems that they only appear united and connected in the different indexes that measure them.

The value of this investigation is that it is a meta-analysis of happiness measures and it could shed light on this subject from a different point of view, not looking at the respondents but looking at the instrument.

### III. METHODOLOGY

#### A. Objectives

As seen above, there is a lot of information about happiness spread around the world and in different disciplines, measures and nomenclatures. The indexes that measure happiness seem to unify all the factors associated to it, so it is illuminating to examine how they summarise what is known. This leads to the following objectives:

O1: To identify what are the different nomenclatures used in the indexes that measure happiness.

O2: For every nomenclature, to determine which are the domains associated to it.

O3: To compare the different domains among nomenclatures in order to establish differences and similarities.

#### B. Techniques

In order to respond to these objectives it is necessary to make a methodological combination. On the one hand, this investigation first requires a review of the literature about happiness in order to identify which are the most popular indexes used to measure it and with which nomenclatures. On the other hand, a deep analysis of these indexes is needed to identify the domains related to happiness and the differences between concepts that apparently refer to the same thing.

##### 1. Scoping Review

Scoping Review is a method of systematised search which consists in summarizing, through different tables, the most relevant literature about a specific object of study and identifying the current gaps in this area [30].

With the aim of finding the most popular indexes, the analysis has been extended to articles, congress and conferences communications and other academic works from 2006 to 2016, as indexed in the main social sciences databases around the world and in Spain: Web of Science, Scopus, JSTOR, Sage, EBSCO, IBSS, CSIC, Dialnet and Google Scholar.

The keywords that have been used to find these works were the result of previous readings about this object of study and a first approximation to the subject in Google Scholar. These were: *happiness index, happiness report, well-being index, well-being report, common good index, common good report, quality of life index, quality of life report, life satisfaction index, life satisfaction report, welfare, politics, governmental index, governmental report* and *policymakers*. Different combinations of these keywords have been used. As a result of this process, an initial sample of 267 documents emerged. Documents were eliminated which did not have an abstract in English or Spanish, belonged to disciplines like medicine or clinical psychology, presented studies in which happiness is measured only in an individual and psychological way, were not research works, or did not present an index to measure happiness. The final sample comprised 180 works.

The next step was to create an analysis table with categories that divided each work into different informative units. The software used to do so was FileMaker. The categories were:

*Reference number, Title of the document, Author/s, Year of publication, Source, Knowledge area, Country of study, Methodology, Macro-theme, Micro-theme, Index or measure and its Application.* In summary, in this sample there are works from all five continents, but in 32.2% of cases the research is not assigned to a country. That is due to the fact that these are essay-style works, which reflect on concrete indexes or the phenomenon of measuring happiness. Works that make comparisons across countries comprise 22.2% of the sample, which demonstrates the desire of academics to find an international index to measure happiness.

The most popular disciplines in which these researches can be framed are Economics, Psychology, Philosophy and Statistics, but there are several works where a multidisciplinary approach is taken. Due to the dominant disciplines that study happiness, 62.8% of the sample uses a quantitative methodology. In addition, the documents of the sample not only refer to index proposals, but also to other reports, investigations and documents generated by governmental and institutional organisms.

The general tendency when studying happiness is either to use an existing index or to create a new one through combination of existing ones. The latter case represents 15% of the sample.

A total of 53 indexes and studies that measure happiness were identified. Nevertheless, some of these works still did not fit with the objectives of this research. Works have been eliminated in which happiness was not a multi-dimensional object, as were those which ultimately were not a happiness' analysis tool.

In the final list different nomenclatures and different geographical scopes appeared. The different indexes' nomenclatures were initially assembled and studied separately. The most popular indexes were reviewed, which include in their nomenclature the words happiness, well-being and quality of life. Other nomenclatures identified were just particular cases in which there was only one index as a sample, meaning comparative analysis was not possible. These were World Values Survey, European Values Survey, Better Life Index, Social Progress Index and Turkish Life Satisfaction Survey.

Finally, happiness was reviewed from the indexes:

- Gross National Happiness [2];
- Happy Planet Index [6];
- Philippine Gross National Happiness Index [31].

Well-being, from the measures:

- International Well-being Index [14];
- Gallup-Healthways Well-being Index [32];
- European Social Survey on Well-being [33];
- Index of Economic Well-being [34];
- National Well-being Programme [4];
- Well-being in 2030 [13];
- Well-being Index [35].

And quality of life, from:

- European Quality of life Survey [8];
- Quality of life Survey [11];
- Quality of life [36].

## 2. Content Analysis and Grounded Theory

With the indexes identified, the next step is to extract the tendencies in this area. For this, the Content Analysis technique is used, which consists in reading and interpreting the content of different types of documents [37]. As [37] establishes, this technique is a way of collecting information in order to analyse it and check or elaborate a theory so, to create it, a theoretical framework is needed. The Grounded Theory is a methodology to construct theories that are 'grounded' in the data themselves [38], so in this research these are the data from the indexes that generate the concepts and dimensions related to happiness, well-being and quality of life. This method consists in the elaboration of analytic codes and categories, not from preconceived hypotheses, but strictly from data. Moreover, the comparative method is used constantly, so the different codes and categories vary throughout the process of analysis. Nevertheless, the Grounded Theory implies conducting the literature review after developing the analysis, which has not been done in this research. It was necessary to begin by identifying the different indexes and nomenclatures of this object of study because the analysis is of happiness, well-being and quality of life as measures, and not as theoretical concepts.

## IV. RESULTS

### A. Happiness

The three indexes that comprise this sample are quite different. Whereas Gross National Happiness (GNH) seeks the respondent's appraisal of several dimensions in Bhutan, the Happy Planet Index (HPI) is a formula that connects life satisfaction, lifespan and ecological footprint, and the Philippine Gross National Happiness Index (PGNHI) is composed of two sub-indexes—Economics and Happiness—where the former refers to the growth rate of the country and in the latter respondents specify the degree of importance they give to every dimension for the promotion of happiness.

Despite the differences between indexes, most of the categories coincide, especially at the level of subcategories which form them.

The results have been summarised by grouping together these different categories from different indexes and renaming them in order to unify the results. The names used to group these categories emerge from the nomenclatures used by the indexes of the sample and as a summary of their meanings.

### 1. Happiness Dimensions

Before starting, the HPI's variable *Inequality of outcomes* was omitted because it gives only the distribution between life expectancy and well-being data in every country. As will be seen, these two variables are considered in this investigation, so *Inequality of outcomes* supposed redundant information.

The following happiness dimensions are the result of an analysis of the categories and subcategories of the indexes of the sample.

#### *Personal Well-Being*

The GNH includes a category named *Psychological well-*

*being*, with subcategories related to life satisfaction (satisfaction with health, with standard of living, with work, with family relationships and with work-life balance), spirituality (level of spirituality, consideration of Karma in everyday life, frequency of praying and meditation), positive emotions (frequency of the feelings of calm, compassion, forgiveness, joy and generosity) and negative emotions (frequency of the feelings of selfishness, jealousy, fear, worry and anger).

GNH's 'spirituality' subcategory could be related to the category *Religion and spirituality* from the PGNHI, which consists in the respondent evaluation of the importance of this for the promotion of happiness.

Inside the HPI's *Well-being* category there is only the subcategory life satisfaction, which partially coincides with the subcategory that has the same naming in GNH.

#### *Health*

A category named *Health* is used by two indexes of the sample: the PGNHI, where respondents assess the level of importance of this category for happiness, and the GNH, where there are the subcategories: self-reported health status, number of healthy days, disability (long-term disability and limitations on activities), and mental health.

The HPI has a variable that could be considered part of this dimension, which is the *Life expectancy* of a country.

#### *Education*

In the PGNHI the respondents should rate the importance of *Education* in the promotion of happiness, and there is also another category called *Technological knowledge* which could be related to it.

In the case of GNH, *Education* is composed of: educational qualification (level of literacy and level of schooling), knowledge (knowledge about local legends and stories, the local religious festivals, traditional songs, the constitution, and the transmission of AIDS), and values (level of justification of killing, stealing, lying, creation of disagreement in human relationships, and sexual misconduct).

The GNH further subcategory 'knowledge about the transmission of AIDS' could be related to the Health dimension mentioned above.

#### *Culture*

One could connect the category named *Culture* in PGNHI, which consists in an assessment of the importance of this category for happiness, with the category named *Cultural diversity and resilience* in GNH, which consists of the subcategories: ability to speak mother language, number of days participated in socio-cultural activities, artisan skills, and code of etiquette and conduct (level of importance and perception of the change in etiquette and conduct).

#### *Community*

The *Community vitality* of GNH could be related with the category from PGNHI *Community involvement and volunteering*, which consists in the assessment of the importance of this category for the promotion of happiness.

*Community vitality* is composed of the subcategories: donation (of time and money), community relationship (sense of belonging in the community and trust in neighbours), family (family members that care about each other, desire to be part of the family, feeling of strangeness inside the family, appropriate time with family, understanding capacity of the family, family as a source of comfort), and safety, which means if the respondent has recently been a victim of a crime. At the same time, the GNH's 'community relationship' and 'family' subcategories could be associated to the PGNHI's *Friends* and *Family* categories, which could be partially included in this dimension. And tangentially, the PGNHI categories *Love life* and *Sexual life* could be related to the categories and subcategories seen above, because both refer to interpersonal relationships.

#### *Ecosystem*

The category *Ecological diversity and resilience* of GNH is shaped by different subcategories on: ecological issues (concern about pollution of rivers and streams, air pollution, noise pollution, absence of waste disposal sites, littering, landslides, soil erosion and floods), feelings of responsibility towards environment, wildlife damage (wildlife as a constraint to crops and damage of crops by wildlife), and urban issues, with further subcategories similar to the 'ecological issues' subcategory: concern about pollution of rivers and streams, air pollution, noise pollution and absence of waste disposal sites.

The GNH 'ecological issues' subcategory could be related to the PGNHI's *Environment* category, where respondents should evaluate the level of importance it has in the promotion of happiness. It is also possible to establish a connection between the GNH 'wildlife damage' subcategory and the category *Ecological footprint* from HPI. The perspective is totally different, but both categories encompass the two poles of the equilibrium between the environment and human activity.

#### *Living Standards*

*Living standards* is a category from GNH that has the subcategories: assets (mobile telephone, fixed line telephone, personal computer, refrigerator, colour television, washing machine, land [space of home] and number of livestock at home), housing (type of toilet used, roof material and number of rooms at home excluding bathroom and toilet) and household per capita income. This last subcategory could be related with the category *Income and financial security* from PGNHI.

#### *Time Use*

The category *Time use* from the GNH has two subcategories. The first is working hours, a subcategory that could be related with the category *Work* from PGNHI, which consists in the evaluation of the level of importance of this item for happiness. The second is sleeping hours. This category from GNH could be also related with the category *Leisure time and sport* from PGNHI, because it is another dimension of time use.

#### *Economy*

*Economics* is a dimension which appears in PGNHI as something totally different from *Happiness*, but at the same time it is contained inside an index that measures it.

Inside the sub-index *Happiness* the respondents are asked to rate the importance of economics for its promotion.

The *Economics* sub-index has subcategories related to the growth rate of the country in different periods of time and in comparison with the neighbouring countries, so it can be concluded that the dimension *Economy* refers to the growth rate of a country.

#### *Politics*

The category *Good governance* of GNH could be related with the categories *Government* and *Politics* from PGNHI, where the respondents have to assess the level of importance of these categories in the promotion of happiness.

*Good governance* is shaped by: government performance (creation of jobs, reduction of the gap between rich and poor, fight against corruption, preservation of culture and traditions, protection of environment, provision of educational needs, and improvement of health services), fundamental rights (feeling of having the rights of freedom of speech and opinion, to vote, to join political party, to form *tshogpa*, to have equal access and opportunity to join public service, to have equal pay for work of equal value, and of being free of discrimination), services (access to health care centres, electricity, method of waste disposal, source of water at household, and quality of water at household) and political participation (Intention to vote in the next elections and *Zomdue* participation). As it can be seen, the category *Good governance* includes subcategories which appear in other dimensions of happiness such as Culture, Ecosystem, Education, Health and Living standards, but feature here as a political issue. From this it can be concluded that there is a tendency to understand governments as responsible of people's happiness.

As seen in this review, the GNH is the predominant index model when measuring happiness. There is a relationship between its categories and subcategories and the ones from other indexes, but it also presents a structure in which all the measures converge. This can be explained by recalling that the GNH was the starting point of the measuring of happiness from governments and policymakers point of view, so everything done after its invention has been influenced by this model. Nevertheless, it is necessary to take into account that every index has its cultural bias, so some of the subcategories that appear are only understandable by knowing the social context in which they emerge (i.e. knowledge about the transmission of AIDS or *zomdue* participation). It is necessary to omit these particular cases when summarising the results and extracting the main ideas inside happiness indexes.

## 2. Hierarchy of Happiness Dimensions

Not all the dimensions mentioned before appear in the same way in the sample. Neither have they appeared with the same frequency.

As can be seen in Fig. 1, the dimensions named Personal

well-being, Health and Ecosystem are those whose aspects appear in the three indexes used to study happiness, so from this frequency approach it can be considered that these dimensions seem to be more related to happiness than the others.

The dimensions Living standards, Education, Time use, Culture, Community and Politics appear in two of the three indexes that comprise the sample, the GNH and the PGNHI. And finally, the dimension Economy appears only in the PGNHI, so it is the least associated to happiness. Moreover, it only analyses growth rate, which partially coincides with the general tendency of measuring the progress of a country in narrowly-defined economic terms.

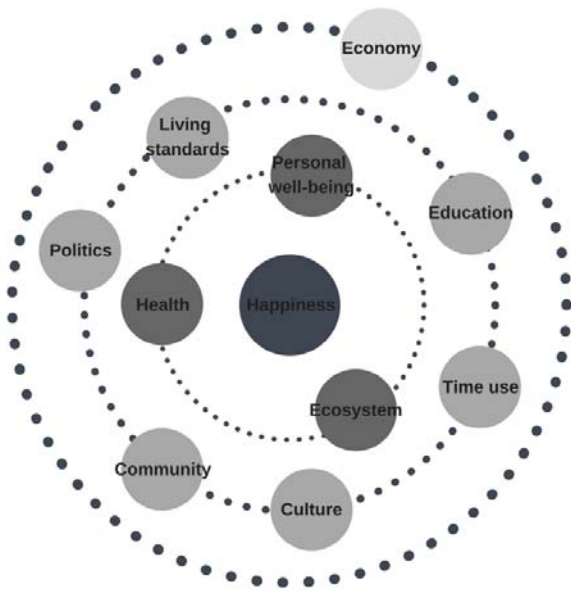


Fig. 1 Dimensions associated to happiness

### B. Well-Being

The indexes that comprise this sample are quite different from each other and measure well-being from different points of view. For instance, the International Well-being Index (IWI), the Gallup-Healthways Well-being Index (GHWI), the European Social Survey on Well-being (ESSW), and the UK's National Well-being Programme (NWP) ask their respondents to assess different items related to well-being, and only the last one also combines these questions with national—as opposed to personal—data. In the case of the Index of Economic Well-being (IEW), it is strongly related to macroeconomic data, so in this instance well-being is understood as synonymous with a nation's wealth and only national data is considered. The same approach is taken with the Well-being Index (WI), the indicators of which use a country's data without taking into account people's points of view. The Well-being 2030 (W2030) is quite different from the rest of the sample, as it identifies the dimensions which people consider to contribute to happiness through a qualitative study. It is necessary to highlight that in the W2030 every country considers some subcategories more important than others and creates different discourses about them.

Despite the differences between indexes, there are some categories that coincide or that can be related.

### 1. Well-Being Dimensions

#### *Personal Well-Being*

Both W2030 and ESSW have the category *Subjective well-being*, but whereas in the W2030 subcategories such as satisfaction with life, freedom of choice, expectations, mood, uncontrollable factors, values and stability and predictability appear as contributions to happiness, the ESSW combines this subject with other variables in a category named *Subjective well-being, social exclusion, religion, national and ethnic identity*. As a result, in the ESSW the only subcategory strictly related to well-being is the 'declared level of happiness', and the others are focused on social issues, health, religion and identity: frequency of social interaction, participation in social activities, trust in others, feeling of safety and criminality, subjective general health and activities hampered by illness, religion, level of religiosity and attendance at religious events, membership of discriminated groups and feeling of citizenship.

Tangentially, the W2030 has a category named *Cultural and spiritual activities* which could be related with the ESSW's *Subjective well-being, social exclusion, religion, national and ethnic identity* because it also refers to different social activities, and makes reference to spirituality and religiosity.

The ESSW has also another category which could be related with the W2030's *Subjective well-being* category when talking about values: *Human values*. It measures the importance to individuals of values such as creativity, richness, luxury, equality (in treatment and in opportunities), admiration, security and safety, experience new things, excitement, obedience, understanding different people, modesty and humility, discretion, enjoyment, pleasure, freedom of decisions, solidarity, success, loyalty, to be careful with environment, and to follow traditions and customs.

The IWI, the NWP and again the ESSW talk about *Personal well-being*. The IWI asks its respondents to rate their satisfaction with their standard of living, health status, life achievements, personal relationships, sense of security and protection, feeling of being part of the community, and spiritual life and religious beliefs, so these subcategories can be related with those seen in the case of ESSW's *Subjective well-being, social exclusion, religion, national and ethnic identity*. Additionally, both IWI and WI have two similar categories, named *Satisfaction with life* and *Life evaluation* respectively, with subcategories related to satisfaction with life at the present and in future. These categories could be associated to the *Subjective well-being* category from W2030.

The NWP is also related with the W2030 *Subjective well-being*, because it talks about satisfaction with overall life, meaning of life, feelings of happiness and anxiety and mental well-being. Again, the ESSW offers a category where different issues are mixed and treated as the same thing. In this case, the category is *Personal and social well-being*, and includes many heterogeneous subcategories: volunteering,

frequency of feelings (optimism, pessimism, depression, lack of motivation, restless, happiness, loneliness, joy, sadness, energy, anxiety, calm and peace), freedom of choice, personal opinion and experiences about one's life (chances to show capabilities, feeling of accomplishment, difficulties to get back after something wrong, learning new things in life, things someone is good at, time to do things, feeling of being appreciated by close people, dealing with important problems in life, appreciation of surroundings, sense of direction in life), personal opinion and experiences about the community (feeling that people in local area help one another and treat everybody with respect, feeling that what is done is valuable and worthwhile, country's life, feeling of closeness to people in local area, support from and to close people, place in society), time use (something interesting, something absorbing, enthusiasm) and physical activity.

In summary, all these categories, subcategories and further subcategories seem to be related with subjective well-being and meaning of life.

#### *Social Well-Being*

The ESSW's *Personal and social well-being* category is interesting because it relates the individual dimension with the collective. On the one side, it has been seen that it talks about personal feelings and their frequency, personal opinion and experiences about one's life and time use, variables that relate to a dimension called Personal well-being. But, on the other side, this category contains subcategories and further subcategories which talk about well-being in a social way: volunteering, feeling of freedom, and personal opinion and experiences about the community.

The NWP's *What we do* category can be related to this *Personal and social well-being*, as it also talks about social activities like volunteering.

Another ESSW's category, *Subjective well-being, social exclusion, religion, national and ethnic identity*, has some subcategories which could be associated to this dimension. For instance, the ones that make reference to the frequency of social interaction, participation in social activities, trust in others, feeling of safety and criminality, subjective general health and activities hampered by illness, religion, level of religiosity and attendance to religious events, membership of discriminated groups and feeling of citizenship.

The ESSW also has a category named *Media and social trust*, which also makes reference to trust in others, so it could be partially integrated into this dimension.

The IWI also has a category named *National well-being*, which is quite different from what has been seen before, because it seems to be a personal evaluation about conditions not strictly related to the respondent's individual well-being, emotions, experiences and points of view, but with the country the respondent lives in. *National well-being* includes satisfaction subcategories: satisfaction with the economic situation, with the state of the environment in the country, with social conditions, with government, with the possibilities that companies and individuals have to run a business and with national security. Following this line, the WI has a

category named *Human well-being*, which explores categories that go beyond personal data and extract statistics from health and population, household and national wealth, knowledge and culture, community (freedom and governance, peace and order) and household and gender equity.

#### *Living Standards and Employment*

There is a group of categories that could be also related because their subcategories are almost the same or complementary.

The W2030 talks about *Economic and employment situation* and has subcategories like job satisfaction, income, non-essential consumption, basic needs, and debt and savings. In relation to job satisfaction, the GHWI has a category called *Work environment*, which is distinct from the 'satisfaction with job' subcategory but includes questions about doing your best at work and the relationship with the supervisor.

In line with employment issues, in the ESSW's *Socio-demographics* there are some subcategories related to the respondent and his/her partner's employment, such as the type of organisation they work in, the employees and employers relationship, the type of contract, the permissions and responsibilities at work, the hours worked, the satisfaction with job, the balance between job and leisure time, the membership of a trade union, the household incomes and unemployment.

Following the household-finances line initiated by W2030, the NWP has the category *Personal finance*, with subcategories like household income before housing costs, wealth per household, satisfaction with household income and difficulty to get by financially. Continuing with this, the IEW has a category named *Economic security* that talks about risk factors that could contribute to a household economic insecurity (unemployment, illness, single parenthood, old age).

In a miscellaneous ESSW category named *Socio-demographics* there are some variables related to household and employment conditions and leisure time, which can be related with the subcategories referred to above.

Included in the NWP's *What we do* category are subcategories related to jobs as they have been referenced in W2030's *Economic and employment situation* and GHWI's *Work environment*, so this NWP category could be partially included in this dimension. It also talks about leisure time and other social and arts activities as something distinct from work time, so these subcategories are also considered in this case.

#### *Economy*

There are some categories which talk about macroeconomics and other kinds of capital.

The WNP offers a category named *Economy* with subcategories like income per head, public sector debt and inflation rate.

The IEW has a category named *Wealth stocks*, with subcategories like capital stock per capita, R&D per capita, natural resources per capita, human capital, net foreign debt per capita and social cost of environmental degradation. And,

more specifically, the IEW also offers categories that could be related to macroeconomics, such as *Consumption flows*, with the subcategories: market consumption per capita, government spending per capita and variation in work hours, and *Equality*, with the subcategories: poverty intensity and income after taxes.

#### Education

The W2030 and the NWP have categories related to education and knowledge. The former has a category named *Education and intellectual development*, with the subcategories: educational opportunities, educational attainments and intellectual aspirations. The latter has a category named *Education and skills*, with the subcategories: human capital, people not in education/employment/training, and citizens with no qualifications.

#### Health

The W2030, the ESSW, the NWP and the GHWI all have categories related to health.

The W2030 has a category named *Health and nutrition*, with subcategories including: personal health, nutritional intake, health care and physical fitness.

The NWP has the category *Health*, with the subcategories: life expectancy, reported disability, satisfaction with health and depression or anxiety.

The GHWI has the category *Physical health*, with the subcategories: sick days, disease burden, hampering, obesity, feeling of well-rested, and frequency of feeling of energy, colds, flus and headaches.

The subcategories from these three indexes also appear in the other measures but in a slightly different way.

In the GHWI's *Healthy behaviour* some subcategories about healthy habits are added: smoking, eating healthily, weekly consumption of fruits and vegetables, and weekly exercise frequency.

The ESSW's *Health and inequality* category also does this and adds subcategories related to the healthcare system: frequency of fruit and vegetables consumption, frequency of physical activity, frequency of smoking and drinking alcohol, height and weight of the respondent, capacity to get medical consultation, treatments used, health problems and their hampering, looking after or helping others, household conflict, financial difficulties, problems with accommodation, risks at work and frequency of feelings (depression, restless, happiness, loneliness, joy, sadness, lack of motivation). As seen, there are some subcategories which could be associated with *inequality* and not *health*, and the last subcategory could be associated with the *Emotional health* from GHWI, which contains subcategories about yesterday feelings (laughter, learning something interesting, being treated with respect, enjoyment, happiness, worry, sadness, anger, stress and depression), with whom and in which situation did they take part.

Finally, the NWP's *What we do* has a subcategory that makes reference to physical activity, a variable that has also been seen in W2030's *Health and nutrition* and in ESSW's

*Health and inequality*, so it could be partially related to this dimension.

#### Environment

There are three studies that talk about the living area. These are: the W2030 with a category called *Infrastructure*, the NWP with a category called *Where we live*, and the GHWI with a category called *Basic access*.

In the first case, the respondents should rate the quality of their living area, their residence and the services. In the second case, respondents are asked about criminality, feeling of safety, access to natural environment, feeling of belonging to the neighbourhood, time to reach key services and satisfaction with accommodation. Finally, the GHWI gathers the categories seen above as well as others related to standard of living: satisfaction with the community area, the cleanliness of water, the medicine and access to health services (dentist, health insurance, doctors), the safety of the place, the affordability of fruits and vegetables, and having enough money for food, shelter and healthcare.

#### Interpersonal Relationships

The W2030 has a category named *Interpersonal relationships*, comprising well-being contributors such as friends, family situation, overall satisfaction in marriage/partnership and with children, generations and other relationships (i.e. pets).

The WNP has a category named *Our relationships* and subcategories like happy relationships, feeling of loneliness and having someone to rely on when having a serious problem.

#### Culture

W2030's *Cultural and spiritual activities* and NWP's *What we do* are categories related to different social activities.

The two measures talk about leisure time and arts/cultural activities, but whereas the *Cultural and spiritual activities* adds the subcategory spirituality and religiosity, the *What we do* has subcategories related to job, volunteering and physical activity.

As indicated in the dimensions Social well-being, Living standards and employment and Health, the first category could be related to the ESSW's *Subjective well-being, social exclusion, religion, national and ethnic identity*, and the second could be related to the categories *Economic and employment situation* and *Health and nutrition* from W2030, *Work environment* from GHWI, and *Personal and social well-being* and *Health and inequality* from ESSW.

#### Ecosystem

There are also some categories related to the state and care of the ecosystem.

The W2030 identifies in its *Environment* category the weather and natural disasters as conditioners of well-being.

The NWP's *Natural environment* looks at countries' macro data about gas emissions, protected areas, consumption of renewable sources and households' recycled waste. And following the kind of data of NWP, the WI's *Ecosystem well-*



*being* has countries' data about land diversity and quality, quality of water and air, species and genes and resource use (materials, sectors, etc.).

### Politics

There are some indexes which make reference to politics. For instance, the NWP has a category named *Governance*, with subcategories including voter turnout in general elections and trust in national government.

Among other subcategories, the W2030's *Civic life* considers the government, freedom of expression, the general political and economic situation, the trust in political institutions, the respect for rights, the lack of discrimination and the state of the society as well-being contributors.

Following the line proposed by W2030, the ESSW's *Politics* category also talks about the level of satisfaction with life as a whole, the present state of economy in the country, the national government and the way democracy works in the country. It also adds new subcategories like interest in politics, voting behaviour in the last elections, contact with politicians or government officials, work in a political party or action group, social participation (supporting a political party, signing a petition, taking part in a demonstration, boycotting a product), placement on the left-right scale, trust in Parliament, legal system, police, politicians, political parties, European Parliament and United Nations, evaluations of the state of education and health services in country, and opinion about income levels, LGTB community, the European Union, and immigration (if it is bad or good for country, which kind of immigrants can come to the country, if there is an enrichment of the culture...).

As has been seen in the case of happiness, the dimension Politics includes some subcategories associated to other dimensions but here conceived as a political issue: Personal well-being, Social well-being, Economy, Education, Health, and Living standards and employment. From this it can be also concluded that there is a tendency to understand governments as partially responsible for people's well-being.

Finally, ESSW's *Politics* category also has two subcategories that try to assess the respondent's feeling about the importance of democracy and the level of democratisation of the country. It relates to another category from the same entity called *Understanding of democracy*, where respondents should express their point of view about national elections' freedom and fairness, voters' capacity to discuss politics before voting, opposition parties and media existence and behaviour, protection of rights, referendums, immigrants' right to vote, courts' activity (treat everyone the same, are able to stop the government if necessary), elections process, government actions (protection against poverty, explaining decisions to voters, reducing the differences in income levels, European governments influence), and the respondents' ideal of democracy (freedom to express political view, changing of policies in response to what the majority thinks, government formation).

As seen in the ESSW categories *Politics* and *Understanding of democracy*, there are some subcategories that talk about

immigration. These subcategories are extended in the category *Immigration* from the same survey, which focuses on the respondent's opinion about: the permissiveness of the entry of immigrants depending on their origin, culture, educational qualification and skills, language, religion and skin colour, the fear about the taking away or creation of jobs, the immigrant taxes, the immigrant criminality, their closeness to an immigrant, the culture collision, the law against ethnic discrimination, the government actions for refugees and immigrants and the attributes associated to every race or ethnic group.

The ESSW has a category named *Media and social trust*, with subcategories about the respondent's television consumption and trust in others. The first subcategory could be related to the ESSW's *Understanding of democracy* subcategory when the latter talks about media, so it could be integrated inside this dimension.

The ESSW also has some categories related with socio-demographic data, which are used more to establish correlations than as dimensions closely related to well-being. These are the *Gender, year of birth and household grid* and *Socio-demographics*. They talk about the number, age, gender and level of education of the members of the household and the relationships between them, the partnership status, and recent activities (work/unemployment, education, permanent disability or retired, community or military service, and housework), among other subcategories.

Because of this, they have not been included in any dimension, except partially *Socio-demographics* when talking about working conditions, in which case it has been included in the Living standards and employment dimension.

## 2. Hierarchy of Well-Being Dimensions

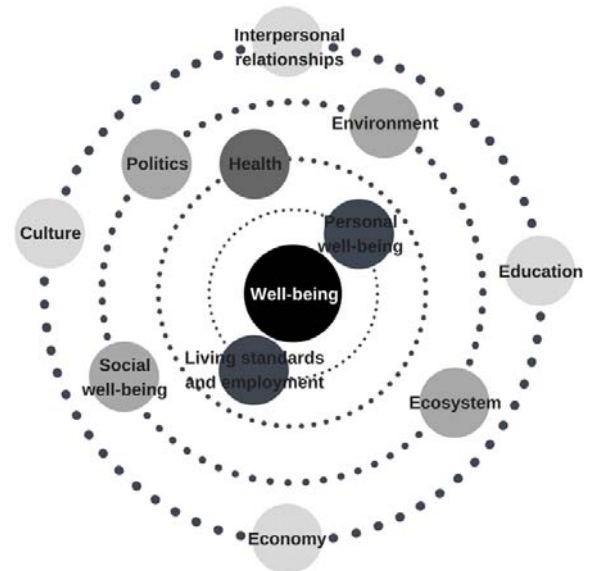


Fig. 2 Dimensions associated to well-being

As was seen with happiness, not all the dimensions appear in the same way in the sample, nor with the same frequency. As can be seen in Fig. 2, the dimensions named Personal well-

being and Living standards and employment appear in five of the seven indexes used to study well-being. The dimension Health appears in four of the seven indexes of the sample. The dimensions Environment, Ecosystem, Social well-being and Politics appear in three of the seven indexes that comprise the sample. Finally, the dimensions Economy, Education, Culture and Interpersonal relationships appear in two of the seven indexes that measure well-being.

### C. Quality of Life

The measures that comprise this sample are methodologically different. The European Quality of life Survey (EQOLS) asks its respondents to assess different items associated to quality of life, the Quality of life Survey (QOLS) combines respondents' appraisals with the country's data, and Quality of life in European Cities (QOLEC) focuses on the respondent's point of view and level of satisfaction with different issues about their city. Nevertheless, the results show that EQOLS, QOLS and QOLEC do talk about the same issues.

#### 1. Quality of Life Dimensions

##### *Employment*

The three surveys talk about employment and its circumstances, but from different perspectives.

The EQOLS has a category named *Employment and work-life balance*, focused on working conditions (preferred working hours, possibilities to vary work start and finish times, to accumulate hours for free time off, and to take a day off at short notice), the difficulties of combining household and family responsibilities with work (tiredness, lack of time, concentration and stress due to work-life balance issues), job insecurity (possibility to lose job and to find one of similar salary), the frequency of involvement in housework (caring for children, grandchildren, elderly or disabled relatives, and cooking or housework), and the attitude towards different work-life issues (to share housework, time spent with family members and other social contacts, and time spent on hobbies and interests).

The QOLS's *Productive and valued activities* also includes working conditions (status in employment, type of contract and permanency) and trade-off between work-family life, and adds subcategories related to health and security at work (occupational diseases, accidents at work) and time use. Occasionally, the QOLS also includes the subcategory 'job insecurity' in its category *Economic and physical security*, and the QOLEC includes the 'evaluation of personal job situation' in its *People's satisfaction with their personal situation*.

The QOLS has another category named *Economic and physical security* which could be also associated to this dimension. When talking about working insecurity, it is related with the QOLS's *Productive and valued activities* and *Economic and physical security* categories and the QOLEC's *People's satisfaction with their personal situation* category.

Finally, the QOLEC has a category, *People's views about their city*, with a subcategory that could be included in this dimension: the employment opportunities. It could be related

with the categories *Employment and work-life balance* (EQOLS), *Productive and valued activities* (QOLS), and *People's satisfaction with their personal situation* (QOLEC) when talking about work.

##### *Health*

The three measures also include categories related to health. The EQOLS' has a category named *Health and public services*, where there are subcategories such as perceived health status, frequency of feelings (tension, loneliness, downheartedness and depression), mental well-being, and quality of the healthcare system (difficulties in seeing a doctor and respondent's appraisal about the quality of the health services). It also asks its respondents to rate the quality of other public services in the country like the education system, public transport, child care services, long term care services, housing services, social housing services and the state of pension system.

The QOLS' *Health* category combines the country's data (healthy life years, life expectancy, infant mortality, age specific death rates), with personal health status (self-reported health, limited activities due to illness, physical activity and psychological well-being), and also evaluates people's access to healthcare (unmet needs, visits to the doctor, social benefits).

In the QOLEC's *People's satisfaction with living in their city*, respondents are asked about their level of satisfaction with healthcare services and sports facilities.

##### *Environment*

In this sample categories related to the citizens' living environment also appear.

The EQOLS has a category named *Home and local environment*, which includes subcategories related to the home ownership situation, the problems with accommodation (shortage of space, rot in windows/doors/floors, damp or leaks in walls or roof, lack of indoor flushing toilet, lack of bath or shower, lack of place to sit outside, probability to leave accommodation because cannot longer afford it), the problems in the neighbourhood (noise, air quality, quality of drinking water, crime/violence/vandalism, litter or rubbish on the street, traffic congestion), the access to services (postal services, banking services, public transport facilities, cinema/theatre/cultural centres, recreational or green areas) and commuting time.

The QOLS has the category *Natural and living environment*, which also considers environmental conditions (noise, pollution, grime and environmental problems) and access to basic services and recreational or green areas.

Similarly, the QOLEC's *People's satisfaction with their city in relation with environment* gathers the same subcategories related to environmental conditions (air quality, noise level, cleanliness, green spaces and fight against climate change). This measure also assesses people's satisfaction level with the infrastructures and facilities of the city in the category *People's satisfaction with living in their city* (satisfaction with public transport, healthcare services, sports facilities, cultural

facilities, educational facilities, streets and buildings, public spaces and availability of retail shops). Therefore, this category is similar to the EQOLS' *Health and public services*, when talking about the quality of the public services.

The QOLS has another category named *Economic and physical security* which can be partially associated to this dimension when talking about physical insecurity (crime, violence, road fatalities and vandalism in the area of residence, and self-reported physical insecurity). This subcategory could be related to the EQOLS's *Home and local environment*, when talking about problems in the neighbourhood.

The QOLEC has a category, *People's views about their city*, which can also be partially included in this dimension. It has a subcategory named 'physical insecurity', which can be related to the category *Economic and physical security* (QOLS). And it has another subcategory, named 'city administrative services', that could be related with the EQOLS' *Health and public services* and *Home and local environment*, the QOLS' *Natural and living environment*, and the QOLEC's *People's satisfaction with living in their city*.

#### Community

In line with public services subcategories, the QOLEC's *Governance and basic rights* asks its respondents to rate their satisfaction with public services. It also includes subcategories related to trust in institutions, social cohesion (interpersonal trust, perceived tensions) and citizen activity (voting behaviour, participation in political parties and professional associations).

Following the social cohesion subcategory, the EQOLS' *Family and social life* talks about different kinds of contact with children, parents, siblings, other relatives, friends and neighbours (face-to-face, phone, Internet or postal contact) and from whom would the respondent get support if needed (help around the house when ill, advice about a serious personal or family matter, help when looking for a job, feeling a bit depressed and wanted someone to talk to, to urgently raise €1000 for an emergency).

Following the 'citizen activity' subcategory, the EQOLS' *Social exclusion and community involvement* includes subcategories related to attendance at religious events, taking part in sports or physical exercise, participation in social activities of a club, society or association, volunteering, political participation (attendance to a meeting of trade union, political party or action group, attendance at a protest or demonstration, signing a petition, contact a politician or public official), use of internet other than for work, and respondents' points of view on their own lives (feeling left out of society, difficulty to find a way, feeling recognized by others, feeling of exclusion because of job situation or income, and feeling of closeness to people in the same living area).

As in the case of *Governance and basic rights*, the EQOLS' *Quality of society* also includes subcategories related to trust (in people, Parliament, legal system, press, police, government and local or municipal authorities) and about perceived tensions between different collectives (poor and rich people, management and workers, men and women, old people and

young people, different racial and ethnic groups, different religious groups and people with different sexual orientations).

The QOLS' *Leisure and social interactions* reiterates categories seen before: participation in activities related to culture, sport, leisure, associations and volunteering, relationships with relatives and friends, and help from others.

The QOLEC has a category, *People's views about their city*, with two subcategories that could be included in this dimension: 'safety and trust', and 'city administrative services'. The first could be related to the categories *Governance and basic rights* (QOLEC), *Quality of society* (EQOLS) when talking about trust, and the second could be associated with *Governance and basic rights* (QOLEC) when talking about social cohesion and with *Governance and basic rights* (QOLEC) and EQOLS' *Social exclusion and community involvement* and *Quality of society* when talking about the presence and integration of foreigners.

#### Living Standards

The EQOLS's *Standard of living and deprivation* and the QOLS' *Material living conditions* talk about living standards.

All the subcategories inside *Standard of living and deprivation* are related to household conditions: its past, current and expected financial situation, its ability to make ends meet, its arrears (rent or mortgage payments, utility bills, payments related to consumer loans, payments related to informal loans), and the items the respondent can afford (to keep home adequately warm, to pay for a week's annual holiday away from home, to replace worn-out furniture, to have a meal with fish/meat/chicken every second day if wanted, to have friends or family for a drink or meal once a month, to buy new clothes).

Inside the category *Material living conditions*, categories at household level also appear: household and personal income, level and structure of consumption, proportion of constrained consumption, wealth (assets, indebtedness and economic strains), material deprivation and housing conditions. Occasionally, the QOLEC's *People's views about their city* asks their respondents to rate their satisfaction with their housing situation.

The QOLS has another category named *Economic and physical security* which can be partially associated to this dimension. When talking about economic insecurity (economic strains, financial burdens, over-indebtedness), it relates to the EQOLS's *Standard of living and deprivation* and the QOLS' *Material living conditions*.

The QOLEC has a category, *People's views about their city*, which can also be related with the EQOLS's *Standard of living and deprivation* and the QOLS' *Material living conditions* when talking about housing conditions.

#### Personal Well-Being

The three surveys of the sample all include categories related to well-being.

In the EQOLS' *Subjective well-being* there are subcategories related to the respondent's point of view about his or her life: optimism about future, feeling that what is done

is worthwhile, feeling of freedom to decide how to live life, time to do enjoyable things, level of happiness and satisfaction with life and different life conditions (education, present job, present standard of living, accommodation, family life, health, social life, and economic situation in the country).

In the QOLS's *Overall experience of life* one could find subcategories related to overall satisfaction, affects and well-being.

In the QOLEC's *People's satisfaction with their personal situation*, respondents are asked about their satisfaction with their life in general.

### Education

Only one measure, the QOLS, has a category explicitly named *Education*, with subcategories about personal education attainments and about nationwide statistics (access to education, Pisa scores, financial data, financial aid and enrolment/graduate data). Nevertheless, in the other measures questions related to education do also appear. In *Health and public services*, EQOLS asks its respondents about their level of satisfaction with the education system as a public service, and in *People's satisfaction with their city*, the OLEC's respondents are asked about their level of satisfaction with city's educational facilities.

## 2. Hierarchy of Quality of Life Dimensions



Fig. 3 Dimensions associated to quality of life

All of these dimensions are shaped by subcategories that appear in the three measures of the sample, so although every of them focus slightly differently on quality of life, from a frequency point of view they all make reference to the same issues (see Fig. 3).

### D. Similarities and Differences between Happiness, Well-Being and Quality of Life

In general, the three concepts make reference to the same issues, though it is difficult to see this at first sight. That is because while the form is different, the substance is the same.

Every index organises the issues associated to happiness, well-being or quality of life differently, so the results that emerge from their analysis (the dimensions of every concept)

are structured dissimilarly. As a result of this, depending on the concept, the measures or subcategories associated to them are differently interrelated, and the dimensions which contain them are slightly different (although in some cases they have been given the same title).

In order to show the correspondences between concepts, the different dimensions identified from the analysis of the indexes will now be reviewed.

First, it is significant that every concept has a dimension where the word *well-being* appears. For happiness and quality of life, *well-being* is understood exclusively as something *personal*, and therefore its sub-dimensions are associated to life satisfaction, positive and negative emotions and meaning of life. It is for this last sub-dimension that there are some issues related to spirituality and thoughts about the purpose of one's life. Additionally, for quality of life, happiness is something different from life satisfaction, as it is understood as a feeling.

Although both concepts seem to be focused on personal/psychological life evaluations, they also include a sub-dimension that puts the individual in contact with his or her life circumstances. Is at this point where the other dimensions associated to happiness, well-being and quality of life are assessed subjectively through level-of-satisfaction questions (i.e. health, living standards and economic situation, social life and productive activities such as work or education).

In the case of well-being, it is odd to see that this concept contains two sub-dimensions called *well-being*, creating redundancy. The first, called Personal well-being, makes reference to the evaluation of subjective life and its circumstances, as happiness and quality of life have done. The second, called Social well-being, goes further and establishes various social circumstances as well-being contributors, such as social interaction, social participation and volunteering, trust in others and feeling of safety inside the community. It also includes other external conditions such as national economic situation, state of the environment, government, social values and education system, which, as has been seen, are considered dimensions that comprise happiness, well-being and quality of life. This *social* aspect of *well-being* could be related to something that has been called Community in happiness and quality of life and Interpersonal relationships in well-being. The conceptions of happiness, well-being and quality of life all include social cohesion as something that influences and shapes them. Social cohesion is understood as personal relationships with close ones (family, friends, partners, neighbours) and interpersonal help and trust in the wider community. In the case of quality of life, when talking about social cohesion there are added sub-dimensions related to the relationship between larger social groups (with different economic status, working roles, gender, age, religion, sexual orientation, race or ethnic group and country of origin), and the feelings that social interaction provokes in an individual. This second sub-dimension also appears in the case of well-being, and in this context happiness is also conceptualised as a feeling. Finally, in the case of the concept of happiness itself, social cohesion is included as a sub-dimension related to the

sense of belongingness to the community.

Both happiness and quality of life talk about social participation, which is the term used to summarise all social activities such as donations, volunteering, participation in different associations, clubs or societies, cultural activities, leisure time, physical activity and attendance at religious events. In both cases the cultural dimension is more extended, but in the case of happiness it is notable that there is separate dimension, called Culture, which also considers cultural identity and preservation issues (language, traditions, and attire). Similarly, well-being also has a further dimension called Culture, which groups together all such activities (participation in cultural and religious activities, leisure time investment, volunteering and physical activity) in opposition to work time.

Quality of life's Community dimension includes sub-dimensions associated to government and politics, which are treated as a separate dimension, Politics, in both happiness and well-being.

Happiness, quality of life and well-being all include sub-dimensions associated with the government performance. In the case of quality of life, there are issues related to the level of satisfaction with public and administrative services (economy, education system, healthcare system, public transport, housing services and pension system), and trust in political institutions (not only government but also parliament, legal system, press, and police). In the case of happiness, the focus is upon the particular policies (cultural, ecological, educational, sanitary and social) carried out by the government in order to promote it. The concept of well-being also gathers together issues related to the assessment of government policies and trust in national and international political institutions. Furthermore, happiness, well-being and quality of life all feature sub-dimensions related to the political system. Well-being includes issues related to political participation (ideology, vote behaviour, interest in politics and opinion about concrete government performances, contact with politicians/officials, media consumption and socio-political participation), and issues related to the political system (satisfaction with democracy, freedom of expression, respect for rights, discrimination, elections system and referendums, political deliberation, existence of pluralistic ideas and courts activity). In the case of happiness, it also contemplates issues related to political participation and the promotion of fundamental rights. Lastly, in the case of quality of life, some new issues relating to political participation are also included (participation in political parties and citizen activism such as attendance to demonstrations and signing a petition).

There is another dimension that appears differently in the three studied concepts, called Ecosystem in happiness and well-being and Environment in quality of life. Happiness, well-being and quality of life all include issues related to the impact of human activity on the natural environment: air, noise and water pollution. Well-being also includes issues related to the state of the natural environment which are, at least initially, independent of human ecological footprint, such as the weather, natural disasters, diversity and quality of

species, genes and land.

The three concepts not only take into account the effects of human activity, but also the reactions it provokes. In happiness issues related to the feeling of responsibility towards the environment can be seen, in quality of life there are themes related to the fight against climate change, and well-being includes concrete actions to take care of the natural environment (protected areas, consumption of renewable sources, recycled waste, etc.).

Apart from natural environment issues, two of the three concepts also contemplate other environmental themes which influence them. Both quality of life and well-being focus on neighbourhood and community circumstances such as the satisfaction with community area, infrastructures and facilities, criminality and feeling of security in the neighbourhood, access to basic and public services and green areas, feeling of belonging to the neighbourhood, affordability of meeting basic needs and commuting time. In fact, for well-being all these issues are included inside an independent dimension called Living area.

Quality of life's Environment dimension serves as a bridge between what has been seen above and the following group of dimensions. It contemplates housing situation, which can be related with a dimension that appears in the three concepts: Living standards.

On the one hand, well-being and quality of life contemplate issues related to the satisfaction and physical problems with accommodation, while happiness refers to assets and house conditions. On the other hand, happiness includes issues related to household income and financial security, and both quality of life and well-being add to these themes (lack of) economic problems with accommodation, household wealth, affordability of meeting basic needs and non-essential consumption, economic deprivations and savings, and possible difficulties in getting by financially (such as risk of unemployment, illness, single parenthood and age).

In the case of well-being, Living standards is directly associated with Employment, a dimension that also appears in quality of life with the same title. In the case of happiness, employment appears as a Time use, in distinction from sleeping and leisure time. Well-being and quality of life' Employment dimensions both talk about job satisfaction, status and employment conditions, the relationship between co-workers, free time, health and security at work, and self-fulfilment from work. In the case of quality of life, issues related to work-life balance and to country's employment opportunities are also considered.

Happiness and well-being contemplate issues related to the state of national economy. These dimensions have been called Economy. In the case of happiness, it establishes the country's growth rate as its contributor. In the case of well-being, it goes further and considers both themes about economic capital per head (income, public sector debt, inflation rate, capital stock, net foreign debt, market consumption, government spending and poverty intensity), and about other kinds of human capital per head (such as R&D, natural resources, human capital and social cost of environmental degradation).

Happiness, well-being and quality of life all talk about Education, but from different points of view. Happiness considers not only personal educational qualifications, but also the knowledge of different cultural and moral aspects. Well-being also focuses on personal intellectual development (personal educational attainments and intellectual aspirations), and on the national education situation (educational opportunities, human capital, citizen's qualifications). Quality of life considers satisfaction with the education system and facilities, and, again, personal education attainments and national education data (access to education, Pisa scores, financial data, enrolment and graduation data).

The last dimension identified is called Health, and appears in all three concepts. Happiness, well-being and quality of life all focus on subjective evaluations of health, mental well-being and positive and negative emotions, and objective conditions (healthy days, disability or illness, physical activity, lifespan, nutritional intake). In well-being there are also added issues related to good and bad health habits and to environmental conditions which could lead to a loss of health.

Both well-being and quality of life consider data about the healthcare system. In the case of well-being, there are themes about medical consultation and treatments, and quality of life contemplates issues as the quality and limitations of the health services, and national data (healthy life years, life expectancy, infant mortality, age specific death rates).

## V. CONCLUSIONS AND DISCUSSION

In the literature review it was shown that, when studying it as a scientific object, happiness as a public concern is necessarily a multidimensional concept: there is not a singular definition of the concept but several life domains which could affect a personal life evaluation. The particularity of the concept then led us to the study of the different indexes from governmental, public institutions and organisations with social and political influence, as they make it easier to go from a philosophical debate to a more pragmatic study of this idea.

As was also seen in the literature review, to this situation is added the fact that different concepts are used indiscriminately as happiness' synonyms—life satisfaction, well-being, quality of life, etc.—so the process of definition becomes even more complex.

The first objective of this investigation was therefore to determine the different concepts used to talk about what is socially desirable. Three popular ideas were identified: happiness, well-being and quality of life. Other related notions were isolated cases which were unrepresentative in the sample. Following this multidimensional conceptualisation of happiness, well-being and quality of life, the different domains that shape these ideas were identified from the indexes that measure them. It is necessary to take into account that the measures of the sample come from different disciplines and geographical scopes, so all of them contain a disciplinary and a cultural bias. Not only this, but the structure of the indexes also depends upon their particular research objectives and the theoretical frameworks they therefore adapted. Nevertheless, the results show that, although every index organises and

names the domains differently, ultimately they all make reference to the same further subcategories. Consequently, the differences between them remain superficial, i.e. how they are structured because of the sample. However, there are some dimensions which appear with greater or lesser regularity in the three samples used. For instance, the most popular dimensions for happiness are Health, Personal well-being and Ecosystem (appear in 3/3 of the sample), and for well-being these are Health, Personal well-being and Living standards and employment (appear in 5/7 of the sample). Although there are some semantic differences, both of the concepts make reference to health and personal well-being as their drivers.

In the case of quality of life, the sample seems to be more homogeneous, as the categories that comprise this concept are the same for the different measures. All three indexes of the sample contemplate categories such as Health and Personal well-being, but also others like Employment, Environment, Community, Education and Living standards. Additionally, it is notable that the three concepts coincide in considering governmental organisations as partially responsible of people's happiness, well-being or quality of life, which makes sense considering that policymaking is the reason that most of these indexes exist. It is also worthwhile to point out that, although most of the indexes which comprise the sample were born of an intention to measure the progress of a country in an alternative way to GDP, all of them consider microeconomic and macroeconomic issues. From this, it can be deduced that if economics could not be considered the fundamental determinant of people's well-being or progress, it is nevertheless still considered as a key contributory factor. In fact, from [19] it is established that happier people live in economically prosperous countries.

As a summary, one could consider that there is little difference between happiness, well-being and quality of life, and that is because they are often used indistinctly. However, every concept has its particularities, and the analysis in every case has its limitations.

In the case of happiness, one of the most striking things is that the sample is very small—only 3 indexes identified—which is shocking when it is considered that this concept is at the origin of a school of thought called Happiness Economics. Moreover, one of the first expressions of this movement is Bhutan's Gross National Happiness index, and lots of indexes emerged from its example. Maybe this could be explained because, both in the literature review and in the analysis of the indexes, happiness seems to be conceptualised as an emotion, a feeling, something determined by the subjectivity of the individuals. Therefore, while it names something desirable, it is an unstable concept with different connotations and subject to mental circumstances, perhaps making it a tricky idea to work with for governments and institutions.

Well-being seems intended to compensate this situation. Happiness could appear as a part of well-being, but this concept is wider and considers different life domains. Simply by seeing the sample size—7 indexes identified—it is clear that researchers, governments and organisms with political influence feel more comfortable with this notion than with

happiness. It seems to be a more academically rigorous concept, and at the same time it offers more shades of every dimension. Well-being seems to be a life evaluation although it has emotional components, and this is the reason it is so popular among scholars and policymakers. It should also be highlighted that well-being is at the same time the whole and the part: it is an index nomenclature and it is a dimension to be taken into account within the other indexes. In fact, well-being as a dimension appears also both inside happiness and quality of life, which makes the fact that it is an easier concept to handle even clearer.

In the case of quality of life, there is again a small sample—3 indexes identified—but the particularity of this concept is that in the sample there is a consensus about what is desirable, because all the measures refer to the same things and appear with the same frequency. At this point, it is interesting to mention the appearance of life satisfaction evaluations in all the concepts. These are used as subjective well-being indicators, but at the same time as measures to evaluate government performance and other life conditions. From this methodology the inference can be made that happiness, well-being and quality of life each consist partly of personal circumstances and partly of environmental circumstances, so all could be considered a combination of personal and social conditions.

To conclude, the dimensions identified in the analysis of the indexes coincide with the dimensions found in the literature review. This makes sense if it is recalled that these indexes were all born from the same process of scientific production, such that they are nothing more than a compilation of the issues identified as correlated with happiness or as contributors to well-being.

From all of the above, it can be concluded that this investigation has clarified which dimensions are associated to happiness/well-being/quality of life in the indexes that measure them, but the task of defining these concepts remains pending. At this point, it is work from other disciplines—such as philosophy, anthropology, sociology or psychology—to offer a theoretical answer to these questions.

For future research, it would be valuable to see which schools of thought are included inside the different indexes because by doing this it may be possible to approximate to a theory about happiness, well-being and quality of life. All these lines, Von Wright identifies three main sources of happiness: to have things which give pleasure (hedonism), to satisfy desires (utilitarianism) and *eudaimonia*, which is to develop personal capacities through correct behaviour (Ancient Greek philosophy) [21]. At the same time, [21] talked about three notions of happiness: as a short-term feeling, as satisfaction (with something), and as an evaluation of the experience's quality in its totality. Future research should investigate whether these happiness definitions can be identified inside the different indexes that measure it. Nevertheless, future attempts to define these notions more clearly must proceed with caution, as all of them imply some connotations that exhibit cultural variation. Therefore, at this point it is important to question whether using all the words

indiscriminately makes the task of defining them easier or even more arduous. Furthermore, it is also important to investigate whether some concepts are used more in some disciplines than others. For instance, [39] established that economists develop quantitative measures for well-being, whereas social scientists establish social indicators to describe quality of life. The difference is not only conceptual, but also methodological.

Finally, future research needs to consider how to set up a hierarchy between dimensions, which could ultimately be considered as values. In this investigation, the different life domains identified have been organized around happiness, well-being and quality of life; this was based purely on a frequency criterion, but it is not how society works. Reference [19] established that this is an ethical debate.

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