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The Socioemotional Well-Being Index (SEWBI): Theoretical Framework and Empirical Operationalisation

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Abstract This article presents the design, process of construction, content and validation of the *Socioemotional Well-Being Index*. This index is a composite indicator of *subjective well-being*, and has been designed with the aim of providing a measurement device for the sociological analysis of the subjective components of quality of life and social quality. Two spheres of knowledge have been combined in its construction: research in social indicators, the recent development of which has been oriented toward the elaboration of composite indicators, and the theoretical content developed in recent decades by the sociology of emotions. As a composite indicator, the index presented in this article offers a *hierarchical* and *multidimensional* alternative to the univariate scales measuring happiness and satisfaction most often used in social research. In addition, in comparison to measures of subjective well-being grounded in cognitive evaluations, this index is based on the evaluation of a series of *emotional states* recently experienced by individuals. The conceptual definition of socioemotional well-being is based on Thomas Kemper's *social interactional theory of emotions* and Randall Collins' *theory of interaction ritual chains*. A "4 factor, 10 variable" solution has been obtained by applying common factor analysis to the data of the European Social Survey, 2006.

Keywords Subjective well-being · SWB · Socioemotional well-being · Sociology of emotions · Composite indicators · Social indexes · Quality of life · Social quality · Status · Power · Life satisfaction · Happiness · Emotional energy

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1 Introduction

This article presents the design, process of construction, content and validation of the *Socioemotional Well-Being Index* (SEWBI)[1]. This index is a composite indicator of *subjective well-being* aimed at the sociological study of *quality of life* and, specifically, the analysis of the social stratification of socioemotional well-being.

The concept of quality of life refers to both objective and subjective dimensions of human existence. The former incorporate normatively determined objective measures of well-being (such as employment opportunities, income and wealth, education level, medical attention and quality of housing), while the latter reflect individually perceived or subjectively experienced well-being (Huppert et al. 2005, 2010). "Subjective well-being (SWB) comprises people's evaluative responses to their lives" (Viterso 2004:299). Veenhoven (1984) defines subjective well-being as the degree to which an individual judges the overall quality of his or her life favourably. This judgment or evaluation can have two components, one *emotional*, which may be expressed, for example, by the degree of happiness an individual experiences, and the other, *cognitive*, which may be expressed by the degree of satisfaction an individual feels regarding the life he or she is leading (Diener 1984, 1994).

Over the last decade, social researchers and statistical institutions, as well as politicians and public officials, have shown great interest in the scientific conceptualisation and measurement of *subjective well-being* (SWB) (Noll 2013; De Smedt 2013; Lhéritier 2012; OECD 2012; ONS 2011; Michaelson et al. 2009; Krueger 2009). In the 1960s pioneering contributions to its study began to appear (Wilson 1967; Veenhoven 1968; Bradburn 1969; Easterlin 1974; Diener 1984). Since then, the number of articles published in academic journals on the subject has grown exponentially. Ever since Richard Easterling showed, in 1974, through his now famous paradox that increases in a country's gross domestic product did not involve a parallel increase in happiness as declared by its population, the reasons for studying subjective well-being and *emotional prosperity* (Oswald 2010) have continued to grow. Currently, the need to go beyond GDP as an indicator to measure the progress of a society makes it even more important to develop adequate models for measuring subjective well-being (CMEPSP 2009).

However, the urgent need for adequate measurement instruments contrasts with the enormous methodological difficulty that its measurement presents. And perhaps this explains the intense academic activity currently taking place in this field, such as, for example, analysing different measurement perspectives (Tay et al. 2013), or establishing new forms of measurement (Diener et al. 2010; Hicks et al. 2013). In this context, and in particular taking into account the relative abandonment in sociology of the study of subjective well-being (Veenhovens 2008), the Socioemotional Well-being Index (SEWBi) has been conceived with the aim of facilitating and encouraging its incorporation in sociological studies carried out through survey technique. In any case, the index constitutes a new model for measuring subjective well-being and requires additional development, further tests of its validity and, above all, future applications to demonstrate its utility in social analysis.

Two spheres of knowledge have been combined in the construction of this index: research in social indicators, the recent development of which has been oriented toward the

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elaboration of composite indicators, and the theoretical content developed in recent decades by the sociology of emotions. As a composite indicator, the index presented in this article offers a *hierarchical* and *multidimensional* alternative to the univariate scales measuring happiness and satisfaction most often used in sociological research. In contrast to scales composed of a single variable, the index was created to offer a measurement model that is both multivariable and parsimonious. The parsimony of the model is essential, reducing to the minimum the number of questions on the index facilitates its incorporation into survey questionnaires.

In addition, in comparison to measures of subjective well-being grounded in cognitive evaluations, this index is based on the evaluation of a series of *emotional states* recently experienced by individuals, drawn from their responses to a survey. In this sense, the SEWBI measures the "emotional" component of subjective well-being exclusively. In addition, within the broad range of emotional states that can condition an individual's emotional well-being, those that, in agreement with sociological theories of the emotions, can be most related to the position that a specific individual occupies in the social structure have been chosen. In this sense, the SEWBI exclusively measures the "social" component of subjective well-being.

This article includes, first, a brief exposition of the two sociological theories of emotions that provide the theoretical framework of the index. Secondly, through the design of a map of emotional states, it offers a theoretical definition of the concept of socioemotional well-being. Third, using data from two different surveys, it shows the results of exploratory analyses carried out applying principal component analysis (PCA) and common factor analysis (CFA). Fourth, the solution obtained by applying common factor analysis to the European Social Survey (ESS 2006) is evaluated; the four factors extracted are interpreted analytically and a confirmatory factor analysis (CFA) is carried out of the selected measurement model. The last section provides some final comments and information regarding the nature and utility of the *Socioemotional Well-Being Index.*

2 Theoretical Framework

The sociology of emotions provides the theoretical framework within which subjective well-being is conceptualised as a phenomenon dependent on the result of social interactions linked to the positions individuals occupy in the social structure. Thomas Kemper's *social interactional theory of emotions* (1978, 1990, 2006), and Randall Collins' *theory of interaction ritual chains* (1981, 1990, 2004), constitute two pioneering and fundamental theories that enjoy wide acceptance and are common references in the field of the sociology of emotions (Turner and Stets 2005, 2006).

2.1 A Social Interactional Theory of Emotions

The social interactional theory of emotions is based, first, on the idea that "a very large class of emotions results from real, imagined, or anticipated outcomes in social relationships" (Kemper 1978:48). In the course of each interaction, actors can maintain, obtain or lose specific benefits or rewards. If actors obtain a reward or benefit they experience pleasurable or satisfying emotions; if they lose benefits or rewards they experience unpleasant or unsatisfying emotions. Secondly, the theory posits that the emotional states actors experience essentially depend on their relative positioning on two basic dimensions of sociability, the *power dimension* and the *status dimension*.

For Kemper (1978:28) the two possible answers to the following question reveal the analytical difference between "power" and "status": In a given social situation, *why does A do what B wants him to do?* First answer: "A does what B wants because A is actually or potentially being coerced to do so by B…" Second answer: "A does what B wants because A wants to do it as a benefit to B." In the first case, A attributes greater power to B; in the second case, A attributes greater status to B and is therefore willing to voluntarily accommodate B's wishes, needs, demands or requests.

Kemper uses a Weberian definition of power: "…the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests" (Weber 1978:51). However, in the status relationship, the key is the willingness with which an actor complies with or offers benefits or rewards to another. Status is "the mode of relationship in which there is voluntary compliance behaviourally with the wishes, desires, wants, and needs of the other" (Kemper 1978:378). The rewards of status, such as admiration, respect, affection and disinterested support, are given not because the actor is forced to do so, but because of the social bond created by the deference, esteem, love, appreciation and respect that one actor feels for another.

The theory predicts the emotional states that actors experience based on their relative or comparative levels of power and status in relation to other actors. An individual will, in general, be content and satisfied when he or she considers that his/her power and status are *adequate,* and will be discontented or dissatisfied when he or she feels his/her power and status to be *insufficient* or *excessive*. Combining these three possible situations with the two basic dimensions of sociability, we obtain six different types of *structural emotions*.

Security is the emotional state that actors experience when they have or believe they have sufficient power resources to face a specific situation. Adequate power generates confidence because it permits an individual to have sufficient control over his/her environment. It also guarantees that the individual will continue to enjoy the benefits and rewards that come with power. Its inverse, *fear*, is the prototypical emotional state of an actor that faces a dangerous or threatening situation with insufficient power resources. Limited control over a situation provokes feelings of anxiety and uncertainty. The inability to force the compliance of others is an obstacle to achieving in this manner certain benefits or rewards. Lastly, *guilt* is the emotional state of actors that obtain reward using excessive power. When the intensity of coercion violates the moral codes regarding the legitimate use of power, individuals not only feel remorse, but also anxiety and fear because of possible reprisals resulting from the anger that abuse of power always awakens in those subject to it.

The feeling of *happiness*, of being content, of joy, of being esteemed, accepted, loved and valued by others, is the prototypical emotional state of an actor, who, in the course of a social interaction receives adequate reward willingly granted by others; "when one receives status in adequate amounts one should 'feel good'" (Kemper 1978:59). In contrast, an individual will experience emotional states of *depression* if others do not grant him or her adequate rewards from status. Given the inherent social nature of human beings, a more or less persistent deficit of affection, esteem, respect and recognition will bring with it, under normal conditions, feelings of loneliness, sadness and depression. Lastly, an actor will feel *shame* if he or she receives and accepts benefits from status that are not merited, as "status is given for meeting standards of competence or achievement in the division of labour or in social relationships" (Kemper 1978:59).

2.2 Interaction Ritual Chains and Emotional Energy

In *The Elementary Forms of the Religious Life*, Durkheim presented his studies on the religion of aboriginal tribes in central Australia. Analysing their ritual practices, he believed he had found the essence of the *sacred*. All sacrificial rituals, such as the *Intichiuma* of the *Arunta*, are structured through a combination of two basic and complementary acts: *an act of alimentary communion*, and *an act of oblation* or offering. A similar circular logic affects both the religious and the social. Human beings create their gods, but their gods create human beings. Individuals receive from society that which makes them human—language, art and morality—but society demands certain sacrifices and renouncements, certain offerings without which the society could never exist. Rituals are, for Durkheim, the social institutions which best incarnate the circular logic of the sacred and the social. *Social rituals are quintessential institutions that produce society*. Thanks to the process of cognitive, valuational and emotive synchrony/attunement activated by the ritual, the sacred emerges as the collective conscience through which individuals experience the power of the social. This power manifests itself in the intense emotion or *collective effervescence* that participants in a ritual experience (Durkheim 1951).

Collins' theory adopts Durkheim's conception of ritual, but following in Goffman's footsteps (1967) it extends its application to the social interactions that are part of daily life. "Ritual is a mechanism of mutually focused emotion and attention producing a momentarily shared reality, which thereby generates solidarity and symbols of group membership" (Collins 2004: 7). The ingredients of ritual provoke a collective intensification of emotional experience, producing the following effects: "(1) group solidarity, a feeling of membership; (2) emotional energy [EE] in the individual: a feeling of confidence, elation, strength, enthusiasm and initiative in taking action; (3) symbols that represent the group; … these are Durkheim's "sacred objects". (4) feelings of morality: the sense of rightness in adhering to the group…" (Collins 2004:49)

This conception of ritual underpins the key concept in Collins' sociology of emotions: *emotional energy* (EE), a lasting mood that occurs in the individual after having collectively shared the same emotional state with others. Which concrete *emotional ingredients* (sadness, horror, pride, happiness, etc.) feed the collective effervescence of a ritual (Collins 2004: 107–108) are not important; what is important is *the emotion that persists* beyond the ritual. Collins uses the concept of emotional energy to refer to these persisting emotions; in other words, EE is a *basic psycho-physiological pattern* associated with the humours, lasting moods and deep feelings that compose individuals' daily lives. A successful ritual elevates the emotional energy of the participants, while a failed, empty or forced ritual diminishes it (Collins 2004:50). The concept of emotional energy is linked to the primary emotions of happiness or joy and sadness or disappointment. High emotional energy involves exhilaration, joy, enthusiasm, effervescence, vitality, feeling good about one-self or confident, while low emotional energy involves disappointment, depression, lack of initiative and negative feelings toward one-self. "Emotional energy is like the psychological concept of 'drive', but it has a specifically social orientation. High emotional energy is a feeling of confidence and enthusiasm for social interaction" (Collins 2004: 108).

The theory of Interaction Ritual Chains proposes that individuals acquire or lose emotional energy in both power and status interactions. "Order-givers maintain and sometimes gain EE, order-takers lose it; being in the focus of attention and thereby successfully enacting group membership raises EE, experiencing marginality or exclusion lowers it. Interaction rituals are connected in chains over time, with the results of the last

interaction (in emotions and symbols) becoming inputs for the next interaction; thus EE tends to cumulate (either positively or negatively) over time" (Collins 2004:118). In short, "High and low EE come from the entrainment of communicative gestures and emotions rhythms that are distinctive to human intersubjectivity; from an individual viewpoint, they are tightly woven together into the human self" (Collins 2004:107).

3 The Conceptual Definition of Socioemotional Well-Being

Kemper and Collins' theories of the emotions provide a suitable framework to develop a sociological-emotional conceptualisation of *subjective well-being*.

The two theories are essentially compatible and complementary. First, both consider social interactions to provoke most of the emotions that really affect and are of importance to us. Secondly, both consider individuals' emotional states to be conditioned by the results they obtain in processes of interaction. Third, despite their micro-sociological character, both theories can be projected onto the macro-sociological sphere as they adopt a *structural perspective* ab initio. And finally, both articulate the emotional dynamic of actors based on two basic dimension of sociability: power and status (Kemper and Collins 1990).

Both the theory of interaction ritual chains and the social interactional theory of emotions maintain that we experience a more or less stable general emotional mood in our lives. The first distinguishes between *long-term* and *transitory emotions*, and the latter between *structural* and *momentary emotions*. Although individuals can obtain or lose emotional energy in the course of each social interaction, according to Collins accumulated emotional energy does not dissipate instantaneously but lasts over time. For his part, Kemper argues "that each actor is either satisfied or dissatisfied in some degree with his own and the other's positions on the power and status dimensions", and this is expressed in structural emotions, which result from the relatively stable structure of a specific social relationship (Kemper 1978:49). "From the structural perspective, the amount of status an actor receives may have a certain degree of stability and consist of a probability that certain types and amounts of rewarding behaviour will be accorded to him" (Kemper 1978:384). In addition, a certain probability exists that an actor will receive specific rewards in function of his/her positioning in the power dimension. In short, this general and lasting emotional state, posited by both theories, would correspond with the degree of *socio-emotional well-being* (SEWB) an individual experiences.

At this point, with the aim of operationalising the concept and selecting concrete emotions which, in the judgment of both authors, are most closely linked with this general state of emotional well-being, an exhaustive analysis of the emotional content of both theories has been carried out, in other words, of the emotions specifically associated with the two theoretical dimensions that Kemper and Collins respectively emphasise. From this analysis we have constructed a map of emotions that characterises socioemotional well-being, which can be seen in Fig. 1.

The emotional states that Collins mentions in referring to *emotional energy* (EE)—vitality/enthusiasm/effervescence versus dejection/depression on one side, and contentment/happiness versus sadness/shame on the other—correspond to the two dimensions of this concept, in other words, a certain level of energy on the one hand, and a certain level of emotional well-being on the other. Following Kemper's theory, which predicts the emotional states that individuals experience based on the degree of relative power and status they have in the context of a given social situation or interaction, we have the emotions of the two other axes of socioemotional well-being: Individuals can feel

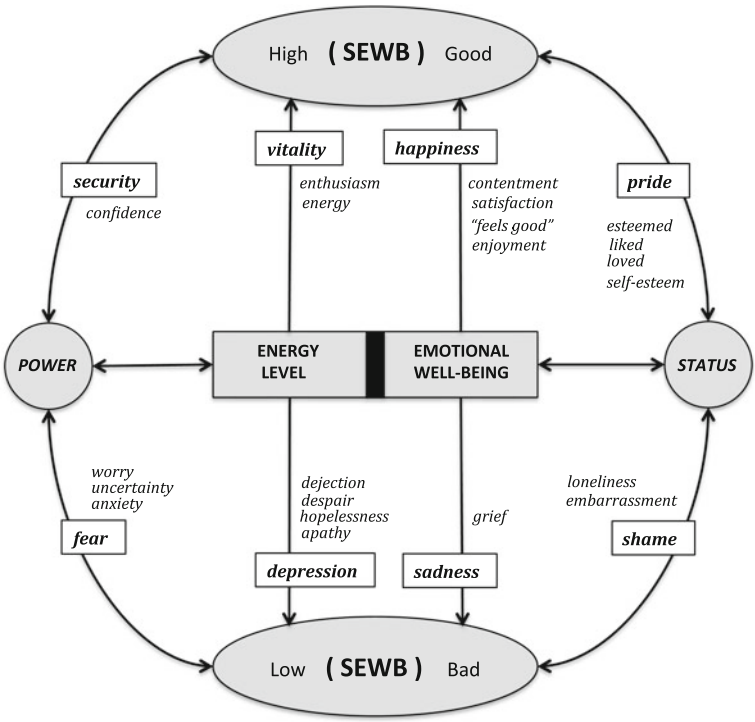

Fig. 1 Socioemotional well-being (SEWB). Conceptual definition

confidence/security versus fear/anxiety/worry on the one hand; and pride/being esteemed/being respected versus feelings of loneliness/shame on the other.

As can be seen in Fig. 1, the map of emotional states linked to the concept of socio-emotional well-being is structured by four axes: (a) the general level of *vital energy* the individual operates with, which can be high or low; (b) the general *quality of emotions* affecting each individual, which can be satisfying or unsatisfying, positive o negative, good or bad; (c) the emotions associated with the *power dimension*, such as confidence or fear, and (d) the emotions associated with the *status dimension*, such as pride or shame.

The configuration of this map of emotional states and the definition of socioemotional well-being proposed are also based on Scheff's *theory of pride and shame* (1988, 1990, 2000). Scheff considers both pride and shame to be the quintessential social emotions, as both indicate the state of our social bonds: if the bond is secure, we feel pride, which is a pleasant emotion; if it is insecure, we feel shame, a painful emotion. Collins explicitly recognises the value of this theory: "Scheff's model is a valuable complement to IR theory because it specifies emotions generated by both high and low levels of Durkheimian solidarity. Successful interactional attunement or an intact social bond generates pride; breaking the bond generates shame. In the terms of IR theory, pride is the emotion attached to a self energised by the group; shame is the emotion of a self depleted by group exclusion" (Collins 2004:120).

In short, *security, vitality*, *happiness* and *pride*, on the one hand, versus *fear*, *depression*, *sadness* and *shame*, on the other, constitute the basic emotions used to measure the

emotional components of individuals' subjective well-being. Socioemotional well-being is a *general and relatively stable emotional state associated with a determined level of vitality (high or low), and the experience of different emotions, which can be positive or negative*. Along with this definition of the emotional side, the sociological or socio-relational side must be defined. From this perspective and considering that "emotions constitute the bodily manifestation of the importance that an event in the natural or social world has for a subject" (Bericat 2012b:2), we can conclude that *socioemotional well-being is a general and relatively stable emotional state that indicates the emotional evaluation, positive or negative, that an individual makes of the results of the totality of his/her social interactions*.

4 The Operational Definition of Socioemotional Well-Being

Once a conceptual definition of socioemotional well-being is reached, it is necessary to establish an empirical operationalisation that permits us to measure and validate the concept. To do this, the 2006 *European Social Survey* was used. This survey incorporated, as proposed by a team directed by Felicia Huppert (Huppert et al. 2005, 2010), an excellent module on *Personal and Social Wellbeing* that contained a significant number of questions on emotions. To choose the questions to include in this module, the team of researchers carried out a prior study in which they took into account diverse empirical approaches to the measurement of well-being. From a hedonist perspective on the measurement of well-being they considered in particular multivariable scales that measure positive and negative emotions, such as the Affect Balance Scale that Bradburn introduced in 1969 and Watson's Positive and Negative Affect Scale (Watson et al. 1988).

Based on the series of questions on emotional states that were finally included in this survey module, as well as the emotional map based on the analysis of Kemper and Collins, we have developed an empirical operationalisation selecting eight questions from the module. First, taking into account the widely demonstrated differential response that respondents provide to questions on positive and negative emotions (Bradburn 1969; Carmines and Zeller 1979; Rosenberg 1965; Diener and Lucas 1999), both positive and negative emotional states were chosen. Secondly, those emotional states most closely linked to the sociological dimensions of power and status were selected, also including emotions associated with Collins' concept of emotional energy, in other words, related to individuals' levels of energy and vitality, as well as their happiness and enjoyment of life. Lastly, following the principle of parsimony, necessary so that the index can be incorporated into surveys and sociological analysis, the number of questions have been reduced as much as possible, taking into account the theoretical dimensions discussed. Figure 2 shows the eight emotional states finally selected from the European Social Survey to empirically operationalise the index.

The exact formulation of the questions for measuring six of the emotional states in the ESS-2006 survey was the following: "I will now read out a list of the ways you might have felt or behaved in the past week. Please tell me how much of the time during the past week: (1) you felt depressed, (2) you were happy; (3) you felt lonely, (4) you enjoyed life, (5) you had a lot of energy, (6) you felt calm and peaceful". The possible answers were: None or almost none of the time; Some of the time; Most of the time; All or almost all of the time. For the two other emotional states the questions were in a different format, asking respondents for their degree of agreement (Agree strongly, Agree, Neither agree nor

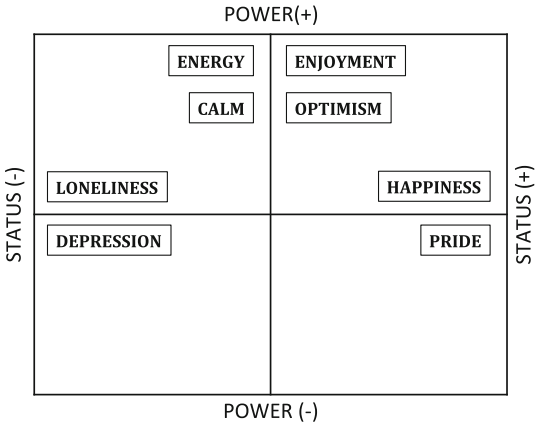

Fig. 2 Emotional content of the ESS-2006 measurement model

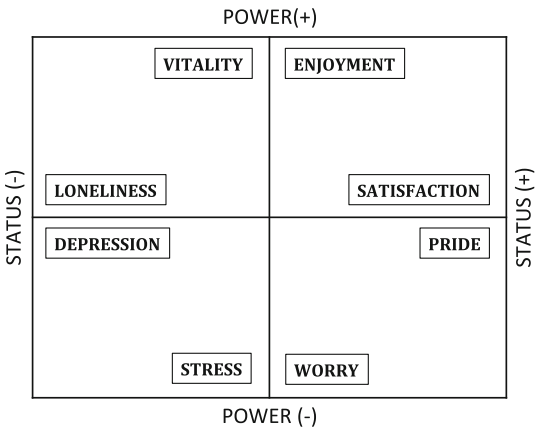

Fig. 3 Emotional content of the CIS-2011 measurement model

disagree, Disagree, Disagree strongly) with the following two statements: (7) "I'm always optimistic about my future", (8) "In general I feel very positive about myself".

With the aim of empirically validating the conceptual definition of socioemotional well-being through the application of methodological triangulation, a second operationalisation approach using another survey, different emotional states and a different question and answer format was developed. Figure 3 includes the emotional states that we proposed to include in the questionnaire of a survey carried out in Spain by the Centro de Investigaciones Sociológicas (CIS)[2] in December 2011 (CIS 2011).

The exact formulation of the questions in the CIS-2011 survey was the following: "In what follows I am going to ask you questions about how you currently feel. Can you tell me to what extent you lately feel very, quite, little or not at all…?" The eight emotional states were the following: (1) Proud of yourself, (2) Worried about the things happening to you, (3) Full of energy and life, (4) lonely, (5) That you are really enjoying life, (6)

[2] The CIS (Centro de Investigaciones Sociológicas) is Spain's leading public institution in the area of social and policy research. The author is grateful to its prior president, Ramón Ramos, and research director, Javier Callejo, for the inclusion of the battery of questions on emotional states in the survey referred to in this study.

Depressed with no desire to do anything, (7) Stressed because of all the things you have to do, and (8) Satisfied with the life you are leading.

The application of different exploratory analyses to both data sets (ESS-2006 and CIS-2011), using both principal component analysis and common factor analysis, permits us to evaluate the consistency and coherency of the developed construct.

4.1 Exploratory Analysis

In a first phase, the exploratory analysis applies principal component analysis to both the Spanish CIS-2011 survey,[3] as well as the Spanish sub-sample of the ESS-2006. From these preliminary analyses only the 3 component, 8 variable solution is presented. The 2 factor, 8 variable solutions, as theoretically represented in Figs. 2 and 3, do not fit the empirical model. In a second phase, data exploration is carried out applying common factor analysis to both the CIS-2011 and the European sample of the ESS-2006. A 4 factor, 8 variable solution was finally chosen. With the objective of validating the substantive interpretation of this 4 factor solution, a similar extraction using 19 emotional items from the ESS-2006 was obtained.

In comparing the results, it is very important to keep in mind that the format of questions and answers used in the two surveys is very different. The CIS-2011 asks about the recent *intensity* of the emotional states experienced by the respondent. The ESS-2006 asks about the *frequency* of the feelings experienced during the past week. It is also necessary to emphasise that both the time when the surveys were carried out and their samples are different.

4.1.1 Principal Component Analysis

Through this initial exploration the intention was to verify the following: first, up to what point the variation in responses given by the respondents to the eight questions could be explained by fewer dimensions; second, to see if the interpretation of these dimensions was consistent with the conceptual definition of socioemotional well-being; and, third, to investigate the possibility of a valid composite indicator of socioemotional well-being.

Tables 1, 2, 3 and 4 show the total variance explained by the first three components (63.5 % for the CIS-2011, and 66.8 % for the ESS-2006-Spain), as well as the loadings of the rotated component matrix. This first analysis reveals a high level of consistency, although we do find some important discrepancies. Exactly the same variables (depression and loneliness) saturate the second component in both models. In addition, three of the four variables that saturate the first component in both models are the same (enjoyment of life, satisfaction/happiness and vitality). However, while the feeling of pride saturates the first component in the CIS-2011, it is the feeling of calm and peacefulness that saturates this component in the ESS-2006. Lastly, while the third component of the CIS-2011 is saturated by worry and stress, which are two emotional states linked to the social dimension of power, the third component of the ESS-2006 is saturated by two different emotions, self-esteem and optimism, emotions linked to pride.

[3] The CIS-2011 is a representative survey of the Spanish population 18 years of age or older of both sexes, with a sample size of 2,483 respondents.

Table 1 Principal component analysis (explained variance. 3 factor, 8 variable solution. CIS-2011)

Component	Initial eigenvalues			Rotated solution; eigenvalues		
	Total	% variance	% cumulative	Total	% variance	% cumulative
1	2.997	37.458	37.458	2.326	29.074	29.074
2	1.205	15.058	52.516	1.491	18.639	47.713
3	.880	11.000	63.517	1.264	15.803	63.517
4	.803	10.037	73.554			

Table 2 Principal component analysis (explained variance. 3 factor, 8 variable solution. ESS-2006-Spain)

Component	Initial eigenvalues			Rotated solution; eigenvalues		
	Total	% variance	% cumulative	Total	% variance	% cumulative
1	3.475	43.441	43.441	2.192	27.395	27.395
2	.980	12.256	55.697	1.612	20.144	47.539
3	.890	11.120	66.817	1.542	19.278	66.817
4	.668	8.356	75.173			

Table 3 Principal component analysis (rotated component matrix. 3 factor, 8 variable solution. CIS-2011)

Emotional states	Components		
	1	2	3
Proud of yourself	**.728**	.074	.061
Worried about the things happening to you	−.165	−.117	**.852**
Full of energy and life	**.718**	−.236	.090
Lonely	−.195	**.827**	−.067
Enjoying life	**.713**	−.321	−.134
Depressed with no desire to do anything	−.453	**.616**	.255
Stressed because of all the things you have to do	.163	.429	**.604**
Satisfied with the life you are leading	**.689**	−.253	−.272

Bold values indicate variables with the highest factor loading

Table 4 Principal component analysis (rotated component matrix. 3 factor, 8 variable solution. ESS-2006-Spain)

Emotional states	Components		
	1	2	3
Were happy	**.644**	−.399	−.232
Felt depressed	−.309	**.730**	.171
Had lot of energy	**.760**	.005	−.244
Felt lonely	−.127	**.850**	.119
Enjoyed life	**.742**	−.219	−.210
Always optimistic about my future	−.197	.036	**.859**
In general feel very positive about myself	−.153	.298	**.776**
Felt calm and peaceful	**.689**	−.243	.016

Bold values indicate variables with the highest factor loading

4.1.2 Common Factor Analysis

With the aim of resolving the inconsistencies detected, we continue the validation process applying exploratory factor analysis to the both Spanish CIS-2011 and the European sample of the ESS-2006.

Common factor analysis (principal axes) is the proper technique when the intention is to validate a measurement model consistent with a previously established conceptual definition. In contrast to principal component analysis, which aims to maximise the explanation of *total variance*, factor analysis distinguishes between *common variance* and *unique variance*, exclusively maximising the explanation of the common variance of the variables introduced in the analysis (Cea D'Ancona 2002; Gorsuch 1983; Nardo et al. 2005). Given that we assume the existence of a reality that corresponds to the construct of *socioemotional well-being*, the measurement that establishes the composite indicator has to exclusively consider the variance that is common to all the variables and not that which may be due to other factors, foreign to the concept intended to be measured. Thus, for example, we are not interested in explaining all the variance of "feelings of loneliness", but only that part linked to greater or lesser socioemotional well-being. In short, it is clear that in the construction of indices or composite indicators, we want the factors to maximise the explanation of the common variance, in other words, the variance associated with the construct being measured.

After carrying out and evaluating the different exploratory analyses, the four factor, eight variable solution was chosen. This solution minimises the inconsistencies detected in the previous phase, improves the ability to distinguish the emotional content of the factors and makes a more coherent theoretical explanation of them possible.

Despite the significant differences between the surveys (date, universe, sample, emotional content, question format, etc.), the results obtained are very similar, revealing the potential coherency, validity and reliability of a composite index for a set of emotional states linked to the concept of socioemotional well-being. The percentages of variance explained are included in Tables 5 and 6, and the factor loadings in Tables 7 and 8.

In the four factor and eight variable solution for both surveys, the first factor is now saturated almost exclusively by the emotional states of happiness (or satisfaction) and enjoyment. In both surveys a factor clearly saturated by depression and loneliness also exists, as does a factor saturated by feelings of pride or self-esteem and optimism. Finally, in the CIS-2011, there is a factor saturated by worry and stress, negative emotional indicators of the power dimension. In the ESS-2006, feeling calm and peaceful, as well as having energy, positive emotional indicators of the power dimension, saturate the last factor. In short, the degree of consistency obtained in this four factor and eight variable solution is very high.

Lastly, common factor analysis was applied to a total of 19 questions on emotional states included in the Personal and Social Well-Being Module of the ESS-2006. The intention of this analysis was, first, to improve the construct validity of the measurement model without substantially altering its degree of parsimony and, secondly, to improve the discriminant validity of the factor linked to the power dimension (Batista-Foguet et al. 2004), given that the two variables that saturate the fourth factor in the European survey are closely correlated with the first factor. Table 9 shows the factor loadings of the rotated matrix.

Table 5 Common factor analysis (explained variance. 4 factor, 8 variable solution. CIS-2011)

Factor	Initial eigenvalues			Extraction sums of squared loading			Rotations sums of squared loadings		
	Total	% variance	% cumulative	Total	% variance	% cumulative	Total	% variance	% cumulative
1	2.997	37.458	37.458	2.567	32.092	32.092	1.250	15.627	15.627
2	1.205	15.058	52.516	.555	6.932	39.024	1.030	12.869	28.496
3	.880	11.000	63.517	.324	4.047	43.071	.817	10.212	38.708
4	.803	10.037	73.554	.258	3.229	46.300	.607	7.592	46.300
5	.666	8.323	81.877						

Extraction method: principal axis factoring

Table 6 Common factor analysis (explained variance. 4 factor, 8 variable solution. ESS-2006)

Factor	Initial eigenvalues			Extraction sums of squared loading			Rotations sums of squared loadings		
	Total	% variance	% cumulative	Total	% variance	% cumulative	Total	% variance	% cumulative
1	3.286	41.073	41.073	2.780	34.748	34.748	1.222	15.278	15.278
2	1.047	13.091	54.164	.538	6.726	41.473	1.022	12.776	28.053
3	.835	10.444	64.607	.298	3.727	45.200	.940	11.753	39.807
4	.701	8.762	73.369	.175	2.189	47.389	.607	7.583	47.389
5	.639	7.983	81.352						

Extraction method: principal axis factoring

Table 7 Common factor analysis (rotated factor matrix. 4 factor, 8 variable solution. CIS-2011)

Emotional states	Factor			
	1	2	3	4
Enjoying life	**.835**	−.269	.187	−.118
Satisfied with the life you are leading	**.497**	−.280	.296	−.280
Proud of yourself	.182	−.118	**.710**	.002
Worried about the things happening to you	−.107	.021	−.015	**.500**
Depressed with no desire to do anything	−.244	**.691**	−.201	.344
Lonely	−.205	**.508**	−.090	.090
Full of energy and life	.400	−.327	.376	.027
Stressed because of all the things you have to do	−.005	.151	.011	**.372**

Extraction method: principal axis factoring

Rotation method: Varimax with Kaiser normalisation

Bold values indicate variables with the highest factor loading

Table 8 Common factor analysis (rotated factor matrix. 4 factor, 8 variable solution. ESS-2006)

Emotional states	Factor			
	1	2	3	4
Always optimistic about my future	−.175	**.643**	.143	−.112
In general feel very positive about myself	−.099	**.642**	.138	−.148
Felt depressed, how often past week	−.211	.172	**.598**	−.271
Were happy, how often past week	**.570**	−.193	−.329	.255
Felt lonely, how often past week	−.203	.136	**.539**	−.080
Enjoyed life, how often past week	**.769**	−.158	−.229	.185
Had lot of energy, how often past week	.349	−.223	−.232	**.319**
Felt calm and peaceful, how often past week	.243	−.191	−.195	**.540**

Extraction method: Principal axis factoring

Rotation method: Varimax with Kaiser normalisation

Bold values indicate variables with the highest factor loading

After the observation and evaluation of the results, it was decided that the incorporation of two new emotional states could favour both the correct substantive interpretation of the factors, as well as the discriminant validity of the fourth factor. The items incorporated are the feeling of "sadness", associated with loneliness and depression, and the sensation of "being rested when waking up in the morning", associated with the absence of worries and with energy. This 4 factor, 10 variable solution is the one finally used to interpret the four dimensions of the Socioemotional Well-being Index.

5 Empirical Operationalisation

The empirical operationalisation of the measurement of socioemotional well-being was obtained applying common factor analysis (principal axes) to the ESS-2006 survey (ESS-2006, ed.3.3, 2011). Based on this analysis, four factors were extracted from a total of ten

Table 9 Common factor analysis (rotated factor matrix. 4 factors, 19 variable solution. ESS-2006)

Emotional states	Factor			
	1	2	3	4
Always optimistic about my future	.151	−.175	**.605**	.115
In general feel very positive about myself	.113	−.110	**.671**	.141
At times feel as if I am a failure	−.220	.198	**−.321**	−.127
On the whole life is close to how I would like it to be	.296	−.291	**.411**	.061
Felt depressed, how often past week	**.658**	−.222	.182	.182
Felt everything did as effort, how often past week	**.509**	−.148	.092	.292
Sleep was restless, how often past week	.393	−.066	.110	**.402**
Were happy, how often past week	−.330	**.608**	−.232	−.086
Felt lonely, how often past week	**.546**	−.202	.145	.047
Enjoyed life, how often past week	−.276	**.671**	−.191	−.084
Felt sad, how often past week	**.695**	−.198	.172	.127
Could not get going, how often past week	**.505**	−.182	.095	.272
Had lot of energy, how often past week	−.204	**.474**	−.167	**−.380**
Felt anxious, how often past week	**.514**	−.032	.223	.237
Felt tired, how often past week	.354	−.071	.120	**.547**
Absorbed in doing, how often past week	−.035	.307	−.061	−.090
Felt calm and peaceful, how often past week	−.227	.328	−.223	−.351
Felt bored, how often past week	**.411**	−.159	.102	.113
Felt rested when woke up in morning, how often past week	−.124	.251	−.145	**−.574**

Extraction method: principal axis factoring

Rotation method: Varimax with Kaiser normalisation

Bold values indicate variables with the highest factor loading

variables that record the emotional states that respondents stated they experienced. In the appendix, the sociodemographic characteristics of the sample used are described (Table 13), as well as the responses given by the respondents to each of the ten questions included in the measurement model (Tables 14, 15, 16, 17).

In this section we first provide and evaluate the basic parameters of the exploratory factor analysis (EFA) carried out. Secondly, we interpret the four factors of this factorial solution in terms of the basic dimensions involved in the measurement of socioemotional well-being. Lastly, we carry out a confirmatory factor analysis (CFA) with the aim of validating the measurement model.

5.1 Description and Analytical Evaluation of the Measurement Model

The factorial solution was obtained with the data from a sample from the European Social Survey in which 20 countries were included (Austria, Belgium, Bulgaria, Switzerland, Cyprus, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Ireland, Netherlands, Norway, Poland, Portugal, Sweden, Slovenia and Slovakia). The sample size was 37,043 respondents, and the sample was weighted using the variables "design weight" and "population size weight". The process of extraction of the four factors required 35 iterations. Given the low number of lost values (0.5 %), these values have been replaced

Table 10 Common factor analysis (variance explained. 4 factor, 10 variable solution. ESS-2006)

Factor	Initial Eigenvalues			Extraction sums of squared loading			Rotations sums of squared loadings		
	Total	% Variance	% Cumulative	Total	% Variance	% Cumulative	Total	% Variance	% Cumulative
1	3.920	39.202	39.202	3.427	34.275	34.275	1.575	15.750	15.750
2	1.110	11.098	50.301	.608	6.084	40.359	1.269	12.687	28.437
3	1.004	10.036	60.337	.492	4.918	45.277	1.034	10.337	38.775
4	.819	8.188	68.525	.380	3.796	49.073	1.030	10.299	49.073
5	.652	6.521	75.045						

Extraction method: principal axis factoring

Rotation method: Varimax with Kaiser normalisation

with the average. The Varimax Method (Varimax with Kaiser Normalisation), an orthogonal rotation method that extracts uncorrelated factors and facilitates their interpretation minimising the number of variables that have high loadings on each factor, has been used for the rotation of factors. The rotation converged after 5 iterations. For the estimate of the factor score coefficients the regression method was used.

The eigenvalues are included in Table 10. The four common factor solution explains 49.07 per cent of the total variance. The correlation matrix shows that approximately half of the correlation coefficients are close to 0.3, that a third are above 0.3, and that a fourth are above 0.45. In a factor analysis the variables should be correlated, but their correlation should not be extremely high (Field 2000:444). Bartlett's test of sphericity is statistically significant to 0.000, which proves the existence of correlation between the variables. At the same time, as the determinant of the correlation matrix is greater than 0.00001 (determinant = 0.68), this reveals that no multicollinearity exists and that linear combinations of the correlated variables can be obtained (Field 2000: 445). The Kaiser–Meyer–Olkin measure of sampling adequacy, or the KMO index, has a value of 0.860, much higher than the minimum limit required (>0.5) in the academic literature (Field 2000: 446). In the anti-image correlation matrix we can also confirm that the KMO values for all the individual variables are higher than 0.50. In concrete, the KMO values for the variables introduced in the analysis range from 0.808 to 0.911. In the reproduced correlation matrix no redundant residual with an absolute value greater than 0.05 is found, which indicates a good fit for the model (Cea D'Ancona 2002:472).

In short, all these statistical parameters demonstrate the suitability of applying factor analysis to the chosen emotional states. In the following section this measurement model is substantively evaluated.

5.2 Interpretation of Common Factors

Considering the factor loadings included in Table 11 we can conclude that the four *analytical dimensions of socioemotional well-being*, based on the measurement model obtained, are the emotional evaluation of *status*, of *situation*, of *self* and of *power*.

Table 11 Common factor analysis (rotated factor matrix. 4 factor, 10 variable solution. ESS-2006)

Emotional states	Factor loadings			
	Status (f1)	Situation (f2)	Self (f3)	Power (f4)
Optimistic about my future	.150	−.176	**.634**	−.122
Very positive about myself	.139	−.102	**.644**	−.156
Depressed	**.619**	−.234	.169	−.212
Happy	−.304	**.629**	−.190	.210
Lonely	**.518**	−.212	.130	−.094
Enjoy life	−.242	**.709**	−.158	.206
Sad	**.782**	−.159	.134	−.167
Feel energetic	−.221	**.346**	−.205	**.383**
Calm and peaceful	−.238	.261	−.187	**.452**
Rested upon waking in the morning	−.119	.128	−.122	**.687**

Extraction method: principal axis factoring

Rotation method: Varimax with Kaiser normalisation

Bold values indicate variables with the highest factor loading

Emotions, as Freud indicated in his discussion of anxiety, have a *signalling function*, that is, they indicate something to the person that feels them (Freud 1948). This signalling function has been emphasised by many sociologists of emotions, such as Hochschild (1983) and Scheff (1990), and from this perspective, it can be stated that "*emotions constitute the bodily manifestation of the importance that an event in the natural or social world has for an individual*". "In its most basic expression this involves three elements: (a) the assessment/appraisal; (b) of an event in the world; (c) made by an individual" (Bericat 2012b:2). Nussbaum argues that "emotions have to do with whatever I do value" (Nussbaum 2001: 49), in other words, emotions indicate how we evaluate that which affects us.

Thus, the dimensions of the socioemotional well-being index indicate how individuals evaluate their social status, general life situation, themselves or their "self", and their social power. In this regard, it should be noted that the measurement model of the index necessarily incorporates all the complexity involved in our emotional processes (Bericat 2012b). The four dimensions are:

(a) *Status*: sadness, depression and loneliness are the emotional states that saturate the status factor to the greatest degree. These states occupy the lower right quadrant of the conceptual map represented in Fig. 1, indicating a low level of vital energy and emotional well-being. Although depression can be conditioned by an individual's persistent failures and by frustration due to a lack of power resources (Seligman 1975), in general it is closely linked to the absence of the type of rewards characteristic of the relational dimension of status (Scheff 1990). Respect, recognition, affection and love are rewards that others voluntarily give to the individual (Kemper 1978). Scheff's theory of pride and shame takes into account the enormous importance that the quantity and/or quality of our social bonds have on our emotional well-being (Scheff 1990).

(b) *Situation*: feelings of enjoying life and of happiness are those with the greatest weight in the composition of the second factor, which indicates the emotional evaluation the individual makes regarding his/her general life situation. Empirical studies carried out measuring levels of happiness (Veenhoven 1984) or satisfaction (Diener et al. 1999, 2012) show that these subjective assessments are correlated with the objective and external conditions the individual is living through at the moment. The link between subjective well-being and energy level, which characterises Collins' concept of emotional energy, is at least partially supported by the importance that feeling full of energy or vitality has on this factor.

(c) *Self*: self-esteem and optimism regarding one's own future are the emotional states that saturate the third factor, which refers to the self, as it measures pride and the evaluation the individual makes of him/herself. The emotional well-being of an individual is not exclusively conditioned by the objective conditions of his/her life situation, but also by the assessment that the individual makes of him/herself. Both self-esteem and optimism are emotional indicators of the personal and psychological resources available to the individual in facing life situations (Huppert et al. 2010; Stets 2010; Tinkler and Hicks 2011). Self-esteem and optimism are essentially diachronic emotional states, as they feed on the successes and failures experienced by the individual in the past, and they project into the future in the form of accumulated energy, confidence and determination. As a result, Kemper (2006: 101) argues that what he calls *anticipatory emotions* arise from individuals' levels of optimism or pessimism and confidence or lack of confidence.

(d) *Power*: in the original approach, included in the CIS-2011 survey, the fourth factor is clearly saturated by two emotional states: worry about the bad things happening to the respondent, and stress over the quantity of things that have to be done. Both worry and

stress are indicators of the lack of control or power that the individual has over his/her life situation or over certain important aspects of life. Worry forms part of the emotional family of fear and is provoked by the expectation that something bad or undesirable may happen. Stress is the emotional consequence experienced by an individual who is obliged for some reason to do more than he/she feels capable of doing. These negative emotions are located in the lower left quadrant of Fig. 1 but are not included in the ESS-2006, although certain positive states that are also indicators of the assessment individuals make in terms of the sufficiency or insufficiency of their power resources are. Waking up with the feeling of having rested during the night indicates that the worries an individual may have did not alter his/her sleep. In addition, feelings of calm and peacefulness indicate that the individual's daily obligations do not produce stress nor do his/her worries provoke anxiety. These emotions are located in the upper left quadrant of Fig. 1, forming part of the *power* factor, as they also reflect the emotional assessment that the individual makes of the degree to and mode in which he/she controls the situation.

5.3 Confirmatory Factor Analysis

The final phase of the analysis is aimed at validating the *measurement model* of the proposed index and consists in the application of confirmatory factor analysis (CFA). CFA, according to many authors, is the most ideal technique for confirming the validity and reliability of a measurement model (Long 1983; Batista-Foguet et al. 2004; Cea D'Ancona 2002; Albright and Park 2009; Bollen 1989; Kline 2011; Arbuckle 2010). A good fit for the model would validate the four analytical dimensions of the concept of socioemotional well-being, the proposed correspondence between variables and latent factors, the adequacy of the number of variables finally used and their reliability.

Figure 4 presents the standardised parameters corresponding to the measurement model of 10 variables and four factors. The specification of this model assumes that a correlation exists between all the latent factors, that the error terms are uncorrelated and that each empirical variable saturates a single factor. For the identification of the model the factor loading of one of the variables for each latent factor has been set at 1.

Each two-headed arrow indicates the covariance between two latent factors, and the figures located in the centre of these arrows, the correlation between them. The figures alongside of the arrows that unite factors and variables are the standardised regression weights, which can be interpreted as the factor loadings in the exploratory factor analysis. Lastly, the figures located in the upper right of the rectangles indicate the *communality* or proportion of variance for each variable that can be explained by the latent factor. This latter parameter can be interpreted as an estimate of the reliability of the variables (Batista-Foguet et al. 2004) (Arbuckle 2010).

With the aim of evaluating the fit of the measurement model corresponding to four different factor solutions, Table 12 presents some of the most widely used tests: Root Mean Square Error of Approximation (RMSEA); Incremental Fit Index (IFI); Tucker-Lewis index (TLI); and Comparative Fit Index (CFI). The lower the value of the RMSEA index, the greater the fit of the model, estimating that values equal to or below 0.05 indicate a good fit. In the case of the IFI, TLI and CFI indexes, the majority of authors consider a value over 0.9 to indicate a good fit (Cea D'Ancona 2002; Arbuckle 2010), although some authors elevate this value to 0.95 (Halleröd and Seldén 2012; Wu and Yao 2007).

Based on Table 12, the initial theoretical approach represented in Fig. 2, with power and status as the only two factors and with four emotional states linked to each factor, does not show a good fit (RMSA = 0.114). The model with three factors reveals a good fit, but

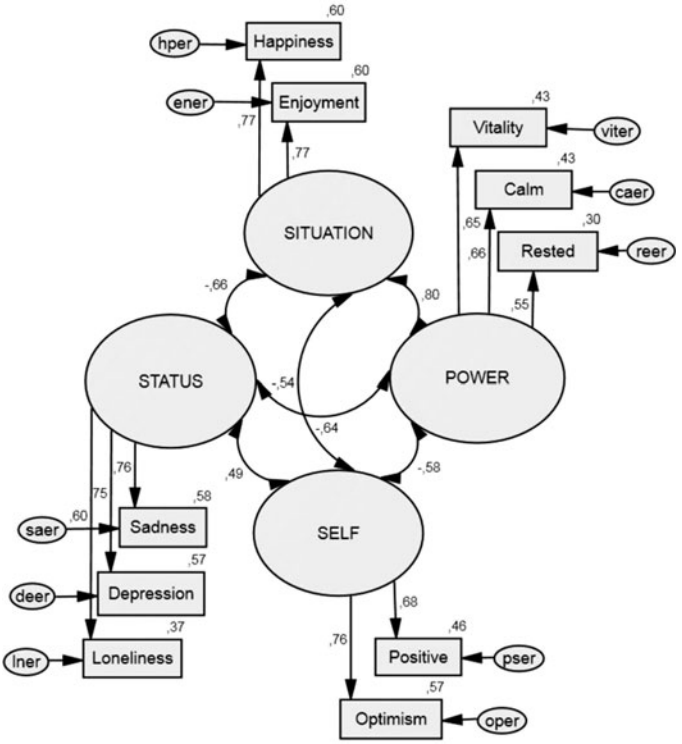

Fig. 4 Confirmatory factor analysis. Standardised estimates. 10 variable, 4 factor model. ESS-2006

Table 12 Confirmatory factor analysis (model fit. Different models. ESS-2006)

Models	RMSEA	IFI	TLI	CFI
4 factors 10 variables (4f10v)	0.039	0.984	0.970	0.984
4 factors 9 variables (4f9v)	0.032	0.992	0.982	0.992
4 factors 8 variables (4f8v)	0.029	0.994	0.985	0.994
3 factors 8 variables (3f8v)	0.042	0.985	0.968	0.985
2 factors 8 variables (2f8v)	0.114	0.878	0.768	0.878

close to the maximum limit (RMSA = 0.042). Lastly, the three models of four factors fit well. In short, this triple confirmation contributes to validating the structure of emotional states and the dimensions of the measurement model for the SEWBI.

6 The Socioemotional Well-Being Index (SEWBI): Final Considerations

Based on the proposed measurement model, the SEWBI is the unweighted arithmetic average multiplied by one hundred of the factor scores obtained in the rotated solution of the applied common factor analysis. The factors were not weighted because the percentage of variance they explain (Table 10) is similar: Status (15.75 %); Situation (12.69 %); Self

(10.34 %); and Power (10.30 %). The negative signs for F1 and F3 serve to orient the value of the four factors in the same direction, in other words, the higher the value on the index, the higher the level of socioemotional well-being. Looking at Tables 14, 15, 16 and 17 we can see that the relationship of the scores on factors 1 (status) and 3 (self) to socioemotional well-being are the inverse—the higher the value in this response category, the lower the socioemotional well-being. In Table 13 in the appendix, we can see the general scores for the index, as well as for its four dimensions for each one of the sample's sociodemographic categories.

$$SEWBI = \left(\frac{(-F1) + (F2) + (-F3) + (F4)}{4} \right) \times 100$$

Regarding the analytical structure of this measurement model, socioemotional well-being is the vital balance that results from a set of emotional states experienced by the individual, who evaluates his/her general life situation, the self that lives it, and his/her position of status and position of power (Fig. 5). From a theoretical-practical perspective, *the index is a composite indicator of subjective well-being that reflects the emotional consequences arising from both the social position occupied by the individual, as well as the result of the totality of his/her social interactions*.

All indices and all composites indicators are the result of a complex *empirical capture* that, through a very specific set of observational operations, ultimately establishes the measurement of a specific phenomenon. In this sense, the Socioemotional Well-being Index has to be considered an initial approach, with methodological limitations and weaknesses, that must be improved in the future and that, above all, must show its usefulness and applicability in sociological research. As a result, subsequent studies may suggest the substitution of certain emotional states for others that offer greater levels of validity and reliability, particularly in the power dimension, which is the dimension that has presented the most methodological problems. In addition, it will be necessary in the future to analyse the measurement invariance in different cultural contexts (Davidov et al. 2008); and the existing relationships between emotional and cognitive measurement models should be studied in-depth. The fact that the *metatheoretical capture* represented in Fig. 1 (the theoretical-conceptual definition), and the *empirical capture*, represented in Fig. 5 (analytical-empirical), do not exactly match, makes it necessary to carry out a deep critique. In science, both representations of reality should configure, through dialogue between them, a productive critical symbiosis capable of producing new knowledge (Bericat 2012a). In this sense, we think that the two definitions of socioemotional well-being, although different, are also compatible and consistent, and can be the basis to develop our social scientific knowledge of subjective well-being in society.

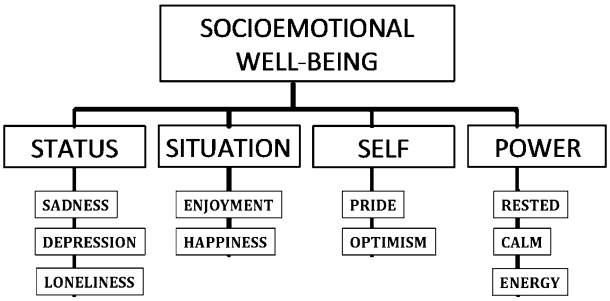

Fig. 5 SEWBI: index, sub-indexes and emotional states

6.1 The Social Structure and Stratification of Socioemotional Well-Being

We end this article again emphasising that the index has been conceived with the aim of serving as *an instrument for the analysis of the social structure and stratification of socioemotional well-being*. Although some initial studies have already been carried out comparing, for example, the degree of socioemotional well-being among married men and women, based on the partners' social class (Bericat 2014a), and the degree of socioemotional well-being of working women, based on their employment situation (Bericat 2014b), the sociological applications of the index are much broader, being limited only by the availability of empirical data and the creativity of the analyst.

Given that the selection of emotional states included in the measurement model has been based on socio-structural theories of emotion—fundamentally by theories that incorporate social power and status as key dimensions (Turner and Stets 2006)—the index constitutes a measure of socioemotional well-being specifically and exclusively linked to the different positions that individuals occupy in the social structure. Although the unit of analysis of the index is the individual, and therefore it is primarily an index of *individual and subjective well-being*, it is important to emphasise that both the theoretical framework which inspires it and the emotional states that configure its content, give it an essentially social nature.

Just as with the classic scales measuring *satisfaction* and *happiness* commonly used in sociological analysis, the index provides a quantitative measurement of the emotional content of subjective well-being. However, the SEWBI, in contrast with these univariate scales (Huppert et al. 2010:13; Huppert and So 2013; Michaelson et al. 2009:55), results from a much more robust and richer measurement model. Its hierarchical structure (Fig. 5) permits the development of a programme of analysis that combines three levels of different and complementary information: (a) the global score for the composite index; (b) the score for each of its four dimensions; and (c) the degree to which a given group of individuals experience certain emotional states. While the information offered by a scale of satisfaction or happiness constitutes a type of black box that impedes the researcher from going further into the study of subjective well-being, the measurement model of this index permits the analysis of both the combination of values of the basic dimensions of socioemotional well-being, as well as the structure of the emotional content beneath a specific subjective state of well-being.

The analytical model of the SEWBI permits the development of a research programme on socioemotional well-being in the context of the very diverse personal, social, economic, political and cultural conditions we live under. The current inability of societies to guarantee on-going material development and the increase in living standards, leads the social sciences to take on the challenge of broadening our knowledge of subjective well-being. In the context of today's crisis-ridden and uncertain hyper-developed, postmodern, consumerist, globalised societies, social scientists must analyse, with creativity and rigour, how individuals feel, how they perceive and evaluate their well-being, and how they adapt emotionally to different contexts and circumstances. Above all, we must investigate the social and individual dynamics established between *objective conditions* and *subjective experiences*.

In short, one of the first projects that this general research programme should adopt, is the study of *the social stratification of emotional well-being*. Collins (2004: 180–183) suggests that there is an unequal distribution of emotional energy. It is clear that not all members of a society enjoy the same level of emotional well-being, nor do all live their

lives experiencing the same emotional states: some enjoy life more than others, some suffer more than others. Sennett and Cobb (1972) carried out an excellent study on the emotional experiences of working class individuals. The title of the book is sufficiently telling: *The Hidden Injuries of Class*. Within this research programme, we can also address the necessary development of a sociology of suffering (Plummer 2012; Wilkinson 2005). We know that people suffer, but we must study who suffers, how much and why.

Appendix

See Tables 13, 14, 15, 16, and 17.

Table 13 Socioemotional well-being (SEWBI) of European population, by sex, age, educational level, and main activity

	Weighted	Dimensions				
	n	Status	Situation	Self	Power	SEWBI
Sex						
Male	15,406	12.3	0.3	6.2	7.2	6.5
Female	16,755	−11.2	−0.3	−5.7	−6.6	−6.0
Age						
15–24	4,697	6.2	18.4	7.8	−11.1	5.3
25–34	4,737	5.9	8.6	4.6	−8.6	2.6
35–44	6,039	5.5	1.6	0.3	−3.4	1.0
45–54	5,752	0.4	−5.9	−3.1	3.2	−1.4
55–64	4,868	−0.9	−7.3	−4.8	8.1	−1.2
65–74	3,519	−9.8	−5.4	−2.1	11.4	−1.5
75–84	2,012	−20.7	−19.0	−5.6	4.4	−10.2
85 and +	555	−22.1	−17.8	−0.3	12.3	−7.0
Educational level						
Less lower secondary	4,769	−20.5	−7.9	−8.3	−4.6	−10.3
Lower secondary	6,210	−5.1	1.0	−4.6	−5.4	−3.5
Upper secondary	12,317	1.8	−3.0	1.8	6.1	1.7
Advance vocational	2,287	9.2	3.8	3.9	6.9	5.9
Tertiary	6,460	13.9	9.3	5.6	−5.2	5.9
Others	137	−22.5	−5.3	7.4	−9.2	−7.4
Main activity						
Paid work	16,530	10.8	4.9	4.4	−0.5	4.9
Education	2,833	5.3	18.5	8.0	−11.6	5.1
Unemployed	1,602	−24.2	−22.9	−11.4	1.4	−14.3
Permanently sick or disabled	803	−60.3	−36.6	−42.7	−36.6	−44.1
Retired	6,586	−9.5	−8.7	−3.6	10.7	−2.8
Housework	3,344	−11.2	−3.6	−5.1	−1.6	−5.4
Total	32,180	0.0	0.0	0.0	0.0	0.0

Source ESS (2006)

Table 14 Status dimension: emotional states of workers from 15 to 65 years of age, by sex, in Europe

Status		Male (%)	Female (%)	Total (%)
Felt sad How often past week	None or almost none of the time	64.2	50.6	58.1
	Some of the time	32.8	43.3	37.5
	Most of the time	2.2	4.3	3.1
	All or almost all of the time	0.8	1.8	1.2
Felt depressed How often past week	None or almost none of the time	68.8	58.7	64.3
	Some of the time	27.0	34.6	30.4
	Most of the time	3.0	4.8	3.8
	All or almost all of the time	1.1	1.9	1.5
Felt lonely How often past week	None or almost none of the time	76.5	71.5	74.3
	Some of the time	19.3	22.8	20.9
	Most of the time	3.0	3.8	3.4
	All or almost all of the time	1.1	1.9	1.5

Source ESS (2006)

Table 15 Situation dimension: emotional states of workers from 15 to 65 years of age, by sex, in Europe

Situation		Male (%)	Female (%)	Total (%)
Enjoyed life How often past week	None or almost none of the time	3.7	4.4	4.0
	Some of the time	24.2	26.1	25.0
	Most of the time	46.0	44.4	45.3
	All or almost all of the time	26.1	25.1	25.7
Were happy How often past week	None or almost none of the time	3.1	3.7	3.3
	Some of the time	23.0	24.6	23.7
	Most of the time	49.7	47.3	48.6
	All or almost all of the time	24.3	24.4	24.3

Source ESS (2006)

Table 16 Personal (*self*) dimension: emotional states of workers from 15 to 65 years of age, by sex, in Europe

Self		Male (%)	Female (%)	Total (%)
In general, *feel very positive about myself*	Agree strongly	17.8	14.3	16.2
	Agree	64.3	60.9	62.7
	Neither agree nor disagree	12.8	15.8	14.1
	Disagree	4.5	7.8	6.0
	Disagree strongly	0.6	1.3	0.9
Always *optimistic about my future*	Agree strongly	15.7	13.2	14.6
	Agree	56.7	52.4	54.8
	Neither agree nor disagree	17.3	20.3	18.7
	Disagree	8.9	12.6	10.6
	Disagree strongly	1.3	1.5	1.4

Source ESS (2006)

Table 17 Power dimension: emotional states of workers from 15 to 65 years of age, by sex, in Europe

Power		Male (%)	Female (%)	Total (%)
Felt rested	None or almost none of the time	16.3	22.3	19.0
When woke up in morning, how often past week	Some of the time	34.1	34.6	34.3
	Most of the time	36.0	31.6	34.0
	All or almost all of the time	13.6	11.5	12.7
Felt calm and peaceful	None or almost none of the time	6.7	11.6	8.9
How often past week	Some of the time	31.5	36.0	33.5
	Most of the time	46.7	40.7	44.0
	All or almost all of the time	15.1	11.7	13.5
Had lot of energy	None or almost none of the time	6.0	9.5	7.6
How often past week	Some of the time	31.8	34.0	32.8
	Most of the time	44.7	41.3	43.2
	All or almost all of the time	17.5	15.1	16.4

Source ESS (2006)

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