Advancing the study of happiness: New contributions about the affective and cognitive mechanisms involved in the experience of happiness

Ana Blasco Belled

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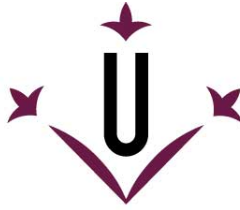
New contributions about the affective and cognitive mechanisms involved in

THE EXPERIENCE OF HAPPINESS

PhD in Psychology
Ana Blasco Belled



TESI DOCTORAL

Advancing the study of happiness: New contributions about the affective and cognitive mechanisms involved in the experience of happiness

Ana Blasco Belled

Memòria presentada per optar al grau de Doctor per la Universitat de Lleida
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"Our experience is what we agree to attend to"

William James

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Sometimes the easiest part turns out to be the more complicated. Thinking about all the people who helped me achieve this milestone makes it a special life experience rather than a mere life stage.

I would like to express my gratitude to the Research Chair of Social Innovation of the University of Lleida and their researchers, Norma and Claudia, and especially to my PhD directors, Carles and Cristina, for creating a professional family wherein I felt supported and loved during my last five years, and the whole process of the thesis – *Pleasure in the job puts perfection in the work*.

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Friendship is the hardest thing in the world to explain. It's not something you learn in school. But if you haven't learned the meaning of friendship, you really haven't learned anything.

LIST OF ABBREVIATIONS

APA: American Psychology Association
bootEGA: bootstrap Exploratory Graph Analysis
CFA: Confirmatory Factor analysis
EI: Emotional Intelligence
EFA: Exploratory Factor Analysis
EGA: Exploratory Graph Analysis
ESEM: Exploratory Structural Equation Modelling
EU: European Union
PWB: Psychological Well-Being
SEM: Structural Equation Modeling
SIC: Social Innovation Chair
SoWB: Social Well-Being
SWB: Subjective Well-Being
QoL: Quality of Life
WHO: World Health Organization

Table of Contents

1. ABSTRACT
    1.1. Abstract
    1.2. Resumen
    1.3. Resum
2. INTRODUCTION
3. THEORETICAL BACKGROUND
    3.1. Happiness: an introduction
    3.2. Happiness and well-being: same but different?
    3.3. Defining happiness: lessons from classifications and taxonomies
        3.3.1. Marie Jahoda's model of mental health
        3.3.2. Hedonism (SWB) and Eudaimonia (PWB)
        3.3.3. Deci and Ryan's self-determination theory
        3.3.4. Quality of life
        3.3.5. Two continua model of mental health and the tripartite model
        3.3.6. From Authentic Happiness to PERMA
        3.3.7. Disentangling overlapping terms and further clarifications
    3.4. How can we measure happiness?
        3.4.1. Self-report measures
        3.4.2. Experiential measures
        3.4.3. Other measures
    3.5. Why is it necessary to study happiness?
    3.6. Is happiness always good?
    3.7. The study of happiness from two poles: outcome *vs* predictor
    3.8. Correlates of happiness
        3.8.1. Happiness and emotional intelligence
        3.8.2. Happiness and humor
        3.8.3. Happiness and optimism
        3.8.4. Happiness, depression and fear of happiness beliefs
4. RATIONALE AND OBJECTIVES
    4.1. Thesis rationale
    4.2. Article 1: Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model
    4.3. Article 2: Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness

4.4. Article 3: What makes the glass half full? Emotional intelligence, happiness and life satisfaction as differentiating characteristics between optimists and pessimists
4.5. Article 4: Fear of happiness through the prism of the dual continua model of mental health
5. METHODOLOGY
5.1. Samples and participants
5.2. Procedure for data collection
5.3. Instruments
5.4. Statistical analysis
5.4.1. Article 1: Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model
5.4.2. Article 2: Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness
5.4.3. Article 3: What makes the glass half full? Emotional intelligence, happiness and life satisfaction as differentiating characteristics between optimists and pessimists
5.4.4. Article 4: Fear of happiness through the prism of the dual continua model of mental health
6. RESULTS
6.1. Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model
6.2. Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness
6.3. What makes the glass half full? Emotional intelligence, happiness and life satisfaction as differentiating characteristics between optimists and pessimists
6.4. Fear of happiness through the prism of the dual continua model of mental health
7. DISCUSSION
7.1. Specific discussion of the four articles
7.1.1. Article 1: Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model

7.1.2. Article 2: Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness
7.1.3. Article 3: What makes the glass half full? Emotional intelligence, happiness and life satisfaction as differentiating characteristics between optimists and pessimists
7.1.4. Article 4: Fear of happiness through the prism of the dual continua model of mental health
7.2. General conclusions of the four articles
7.2.1. A glimpse back at the past: How may life satisfaction judgments preclude happiness?
7.2.2. Handling the present: How do emotional mechanisms benefit happiness? New contributions from mood attention and [not so new] from mood repair
7.2.3. A glimpse into the future: Why do expectancies play a significant role in happiness?
8. CONCLUSIONS
8.1. Final bullets
8.2. Future avenues of research
8.3. Limitations
9. REFERENCES

1 ABSTRACT

1.1. Abstract

We care about the pursuit of happiness. Most people strive to live a life of meaning and pleasure. Researchers make efforts to understand and promote the conditions for greater happiness. Policy makers focus on building societies provided with greatness and happiness. But the study of happiness began many centuries ago, when moral philosophers reflected on the good life. As the subject of thousands of publications in recent decades, the realm of happiness is currently considered a promising field in terms of providing answers to long-standing questions about how people can have better lives. Recent advancements in research have elucidated some of the key ingredients of the recipe for happiness, and developed simple and effective techniques to "cook" these ingredients at individual and societal levels. Despite the significant body of knowledge, some important aspects of happiness still remain inconclusive or speculative.

To begin with, one major issue in the study of happiness is its association with emotional intelligence (EI). To date, despite the fact that research has long examined this issue, existing accounts fail to resolve the effect that one of the EI facets (mood attention) exerts on happiness. The method employed to measure EI is believed to be the cause of such inconclusive results. Applying an appropriate approach to assess EI will help to disentangle the role that each EI facet plays in happiness.

Second, humor is an increasingly relevant area in the realm of happiness, with new emerging forms of humor being introduced. Two of them are virtuous humor and the dispositions towards ridicule and laughter, which take special significance in social interaction contexts. As matters stand, there has been little quantitative analysis of the relationship between these new forms of humor and happiness. Answers to this issue will shed light on possible mechanisms to promote happiness.

Third, another potential major source of uncertainty is examining whether happy people are more optimistic. Current research has investigated this issue from the variable-centered approach, which accounts for happiness and optimism as outcomes rather than personal characteristics. Conversely, the person-centered approach offers potential advantages to resolve this question because it describes differences between groups with similar characteristics (e.g., very happy, not-so-happy, or unhappy). This way, the examination of whether optimists are characterized as happy people could be plausible.

And lastly, although happiness has traditionally been considered a highly valued goal in people's lives, recent developments have investigated fear of happiness

beliefs. That is, thoughts that happiness should be avoided because it is followed by times of misfortune. From the lens of the dual continua model of mental health, the presence of happiness and the absence of depression are requisites for a complete state of mental health. So far, no previous study has examined fear of happiness beliefs within the framework of the dual continua model of mental health. This issue will add to the body of knowledge on the relationship between happiness and depression.

As I proceed, an essential remark underpinning the whole investigation of this thesis should be noted. A major theoretical limitation that has dominated the field for many years is the conceptualization of happiness. That is, an overarching conception of happiness lacks empirical evidence, and its potential connection with and differentiation from subjective well-being is a matter of academic disagreement. Although this thesis avoids substantive disputes over the nature of these constructs, the lack of consensus in the definition of happiness may unavoidably hinder the study of its correlates. This thesis focuses, by contrast, on accounting for the four main unresolved questions explained above, in an attempt to strengthen the study of happiness.

This thesis takes the form of a compendium of four articles, each addressing one of the aforementioned questions. The arguments of this thesis support the importance of scientifically studying happiness and providing empirical evidence of some of its correlates, thus enhancing advancement in this realm of research.

Keywords: happiness, emotional intelligence, optimism, humor, fear of happiness

1.2. Resumen

La búsqueda de la felicidad importa. La mayoría de las personas se esfuerzan por alcanzar una vida de significado y placer. Los científicos se esfuerzan por comprender y promover las condiciones para una mayor felicidad. Los profesionales de legislación y política se centran en construir sociedades que se caractericen por la excelencia y la felicidad. Pero el estudio de la felicidad comenzó hace muchos siglos, cuando los antiguos filósofos reflexionaba sobre la buena vida. Tras numerosas investigaciones durante las últimas décadas, el estudio de la felicidad actualmente se considera un campo prometedor en la provisión de respuestas, que durante siglos han existido, acerca de cómo cómo las personas pueden tener una vida mejor. Recientes avances en la investigación han aclarado algunos de los ingredientes clave que conforman la receta de la felicidad, y han desarrollado técnicas simples y efectivas para poder "cocinar" estos ingredientes tanto a nivel individual como social. A pesar de las evidencias, algunos aspectos importantes en el estudio de la felicidad todavía estan irresueltos o yacen en un estado especulativo.

En primer lugar, un tema importante se refiere a la relación entre felicidad e inteligencia emocional (IE). Pese a ser un tema que ha suscitado numerosas investigaciones, los resultados existentes hasta la fecha no logran aclarar el efecto que una de las facetas de la IE (atención emocional) ejerce sobre la felicidad. Es posible que el método empleado para medir la IE sea la causa de tales desacuerdos. De este modo, la aplicación de un enfoque metodológico más apropiado para evaluar la IE podría ayudar a resolver el rol que tiene cada faceta de la IE sobre la felicidad.

En segundo lugar, el humor es un área con cada vez más relevancia en el ámbito de la felicidad en la que se están introduciendo nuevas formas de humor. Dos de ellas son el humor virtuoso y las disposiciones hacia el ridículo y la risa, que cobran especial importancia en los contextos de interacción social. Al ser un tema emergente, pocos estudios han abordado la relación entre estas nuevas formas de humor y la felicidad. Respuestas a esta cuestión pueden informar sobre posibles mecanismos para promover la felicidad.

Tercero, otra área que requiere respuesta desde el campo científico tiene que ver con la conjetura sobre si las personas felices son, de hecho, más optimistas. Este tema se ha investigado desde el enfoque centrado en la variable, en el cual la felicidad y el optimismo no se consideran características personales, sino como resultado de otras variables. Por el contrario, el enfoque centrado en la persona

ofrece potenciales ventajas para resolver esta cuestión, ya que describe posibles diferencias entre grupos con características similares (e.g., muy felices, no tan felices o infelices). De esta manera, la investigación si los optimistas se caracterizan por ser personas más felices podría llevarse a cabo de una manera más fidedigna.

Y, por último, aunque la felicidad ha atribuido tradicionalmente vista como un objetivo muy valorado y perseguido en la vida de las personas, investigaciones recientes han revelado que existen creencias de miedo a la felicidad. Es decir, creencias acerca de que la felicidad conlleva posteriores períodos de desgracia e infortunio y, por lo tanto, llevando a pensar que la felicidad debe ser evitada. Desde el punto de vista del "modelo doble continuo" de salud mental, la presencia de felicidad y la ausencia de depresión un requisito indispensable para un estado completo de salud mental. Hasta ahora, ningún estudio previo ha examinado las creencias sobre el miedo a la felicidad en el marco del "modelo dual continuo" de salud mental. La investigación sobre esta cuestión otorgará conocimiento respecto a la relación que existe entre felicidad y depresión.

Según avanzamos, debe tenerse en cuenta una observación esencial que sustenta toda la investigación de esta tesis. Una importante limitación teórica que ha dominado el campo durante muchos años se refiere a la conceptualización de la felicidad. Hasta la fecha, los teóricos no han conseguido acordar una concepción general sobre la felicidad, siendo su posible conexión con y diferenciación del bienestar subjetivo una cuestión de continuo desacuerdo académico. A pesar de que esta tesis evita cualquier disputa sustantiva sobre la naturaleza de estos dos constructos (felicidad y bienestar subjetivo), la falta de consenso acerca de una definición global de felicidad puede dificultar inevitablemente el estudio de sus correlatos. La presente tesis se centra, por el contrario, en dar cuenta de las cuatro cuestiones no resueltas explicadas anteriormente, para así contribuir al desarrollo del estudio de la felicidad.

Esta tesis está formada por un compendio de cuatro artículos, en el cual cada uno de ellos aborda una de las cuestiones desarrolladas anteriormente. Los argumentos de esta tesis respaldan la importancia de estudiar científicamente la felicidad, y contribuye al avance de su estudio a través de la investigación de algunos de sus correlatos.

Palabras clave: felicidad, inteligencia emocional, optimismo, humor miedo a la felicidad.

1.3. Resum

La cerca de la felicitat importa. La majoria de les persones s'esforcen per aconseguir una vida de significat i plaer. Els científics s'esforcen per comprendre i promoure les condicions per a una major felicitat. Els professionals de la legislació i la política se centren en construir societats que es caracteritzin per l'excel·lència i la felicitat. Però l'estudi de la felicitat va començar fa molts segles, quan els antics filòsofs reflexionaven sobre la bona vida. Després de nombroses investigacions durant les últimes dècades, l'estudi de la felicitat actualment es considera un camp prometedor per respondre preguntes, les quals han existit durant segles, sobre com les persones poden tenir una vida millor. Avanços recents han aclarit alguns dels ingredients clau que conformen la recepta de la felicitat, i han desenvolupat tècniques simples i efectives per a poder "cuinar" aquests ingredients tant a nivell individual com social. Malgrat les evidències, alguns aspectes importants en l'estudi de la felicitat encara estan irresolts o romanen en un estat especulatiu.

Primerament, un tema important es refereix a la relació entre felicitat i intel·ligència emocional (IE). Malgrat ser un tema que ha suscitat nombroses recerques, els resultats existents fins avui no aconsegueixen aclarir l'efecte que una de les facetes de la IE (atenció emocional) exerceix sobre la felicitat. És possible que el mètode emprat per a mesurar la IE sigui la causa de tals desacords. D'aquesta manera, l'aplicació d'un enfocament metodològic més apropiat per a avaluar la IE podria ajudar a resoldre el rol que té cada faceta de la IE sobre la felicitat.

En segon lloc, l'humor és una àrea amb cada vegada més rellevància en l'àmbit de la felicitat en la qual s'estan introduint noves formes d'humor. Dos d'elles són l'humor virtuós i les disposicions cap al ridícul i el riure, que cobren especial importància en els contextos d'interacció social. Donat que es tracta d'un tema emergent, pocs estudis han abordat la relació entre aquestes noves formes d'humor i la felicitat. Respostes a aquesta qüestió poden informar sobre possibles mecanismes per a promoure la felicitat.

Tercer, una altra àrea que requereix resposta des del camp científic té a veure amb la conjectura sobre si les persones felices són, de fet, més optimistes. Aquest tema s'ha investigat des de l'enfocament centrat en la variable, en el qual la felicitat i l'optimisme no es consideren característiques personals, sinó resultat d'altres variables. Per contra, l'enfocament centrat en la persona ofereix potencials avantatges per a resoldre aquesta qüestió, ja que descriu possibles diferències entre grups amb característiques similars (e.g., molt feliços, no tan feliços o infeliços).

D'aquesta manera, estudiar si els optimistes es caracteritzen per ser persones més felices podria dur-se a terme d'una manera més fidedigna.

I, finalment, encara que la felicitat ha estat tradicionalment vista com un objectiu molt valorat i perseguit en la vida de les persones, investigacions recents han demostrat que existeixen creences de por a la felicitat. És a dir, creences de que la felicitat comporta posteriors períodes de desgràcia i infortuni i, per tant, portant a pensar que és millor evitar-la. Des del punt de vista del “model doble continu” de salut mental, la presència de felicitat i l'absència de depressió són un requisit indispensable per a un estat complet de salut mental. Fins ara, cap estudi previ ha examinat les creences sobre la por a la felicitat en el marc del “model dual continu” de salut mental. La recerca sobre aquesta qüestió atorgarà coneixement respecte a la relació que existeix entre felicitat i depressió.

Segons avancem, ha de tenir-se en compte una observació essencial que sustenta la recerca d'aquesta tesi. Una important limitació teòrica que ha dominat el camp durant molts anys es refereix a la conceptualització de la felicitat. Fins avui, els teòrics no han aconseguit establir una concepció general sobre la felicitat, sent la seva possible connexió amb i diferenciació del benestar subjectiu una qüestió de continu desacord acadèmic. Malgrat que aquesta tesi evita qualsevol disputa substantiva sobre la naturalesa d'aquests dos constructes (felicitat i benestar subjectiu), la falta de consens sobre una definició global de felicitat pot dificultar inevitablement l'estudi dels seus correlats. La present tesi se centra, per contra, en donar compte de les quatre qüestions no resoltes explicades anteriorment per, d’aquesta manera, contribuir al desenvolupament de l'estudi de la felicitat.

Aquesta tesi està formada per un compendi de quatre articles, en el qual cadascun d'ells aborda una de les qüestions desenvolupades prèviament. Els arguments d'aquesta tesi recolzen la importància d'estudiar científicament la felicitat, i contribueix a l'avanç del seu estudi a través de la recerca d'alguns dels seus correlats.

Paraules clau: felicitat, intel·ligència emocional, optimisme, humor, por a la felicitat.

2 | INTRODUCTION

This thesis has been developed within the framework of a Research Chair Program – the Social Innovation Chair (SIC) of the University of Lleida. The SIC stands at the center of collaboration between public and private institutions that provide funding to carry out specific projects with a common goal: to contribute to people's quality of life. Participating institutions administer funds in partnership with the University of Lleida (public educational institution). In this case, funding was provided by "Obra Social de la Caixa" (private financial institution), the Council of Lleida (public local body) and the City Hall of Lleida (public municipal body).

The aim of the SIC is to generate new value in the context of local social actions. It is committed to societal progress for the benefit of local people. In an attempt to comprehensively promote communication between various social agents, qualified professionals and society as a whole, the SIC establishes synergies with universities, public entities and private organizations by sharing social dialogs and knowledge transfer.

Drawing on the premises of positive psychology, the SIC fosters new ideas and resources to facilitate effective and sustainable solutions, placing emphasis on the strengths of healthy people and organizations. Its goal is to become an area based on the anticipation and detection of new social needs, capable of promoting research and new models of intervention for people's well-being. Through its lines of research "well-being and healthy organizations" and "person-centered models of social care", it promotes training and consulting activities with the intention of reaching out to a wider spectrum of society. Since its inception, the Chair has carried out different investigations based on these two lines of research, and has disseminated scientific knowledge through participation in different national and international conferences and symposia, and through the publication of many research articles.

The thesis being presented here is embedded within the "well-being and healthy organizations" research line. Currently, happiness is considered an appropriate measure for social progress and one of the objectives for public policies. In efforts to bring together all the data collected from the different projects within the SIC, this thesis started as an attempt to combine the evidences in order to provide empirical knowledge.

Within the framework of the SIC, I was fortunate enough to be admitted as a pre-doctoral student of the University of Lleida. As such, I had the chance to obtain an Erasmus fellowship. I did a three-month international stay (November 2017-January

2018) at Cardinal Stefan Wyszyński University in Warsaw, which has allowed me to opt for an international PhD mention.

This thesis is composed of a compendium of four research articles: two published and two undergoing review in two scientific journals. These articles are the underpinning of the thesis, and all of them were possible thanks to the data collected under the SIC projects. The overall structure of the thesis takes the form of eight chapters, including this introductory chapter. The structure has been organized in the following way.

Preceded by a brief presentation about the foundations of this thesis (first and second chapters), the third chapter introduces the theoretical background, which is divided into eight sections. The first section begins with a general overview of the study of happiness. The second section examines whether happiness and well-being can be taken as synonyms or rather as different notions. Accordingly, in the third section we run through some of the principal theories of well-being in an attempt to provide different conceptualizations of happiness, avoiding substantive discussions about its nature. The fourth section focuses on the measurement of happiness. In the fifth section we put forward reasons to support the study of happiness, while in the sixth section we discuss whether happiness is always beneficial. In the seventh section we reflect on the dichotomy of happiness as a predictor or as an outcome. Lastly, the eighth section thoroughly examines four correlates of happiness, which are the basis of the four articles.

A description of the rationale of this thesis and the specific articles' objectives is presented in chapter four.

Chapter five is concerned with the methodology used for this thesis.

Chapter six contains the four articles, which form the backbone of the thesis.

The seventh chapter draws upon the entire thesis; it elaborates on the specific findings of each article and provides an overarching discussion of the general implications.

Finally, chapter eight gives a brief summary of the conclusions, critiques of the findings and potential avenues of research.

3 THEORETICAL BACKGROUND

No human quest may claim a larger following than that for happiness and satisfaction in life. Even the highest ethics tends to justify itself by its contribution to human happiness. The Beatitudes themselves constitute an attempt to formulate the conditions of the most blessed existence (…) It becomes, therefore, extraordinary almost beyond belief that so few attempts have been made to apply the techniques of psychological study to the understanding of happiness.

Watson (1930, p. 79)

3.1. Happiness: an introduction

What is a *well-lived* life? What contributes to being well? Is happiness achievable? How can we build and promote happiness at individual and community levels? All these questions have been the target of great thinkers since ancient times, when philosophers like Confucius, Aristotle or John Stuart Mill raised concerns about what characterized a good life. In recent decades, these questions have been addressed in academic discussions, but this time with an empirical base. While philosophers attempted to observe and prescribe the good life, contemporary social and behavioral scientists are rather more focused on scientifically identifying and defining the factors that enable people to subjectively experience a meaningful and virtuous life (Diener, Oishi, & Tay, 2018). As a result, the study of subjective experiences, judgments and feelings – that is, the study of happiness – mainly relies on evaluations that people make about their lives. This realm now appeals to many areas of research ranging from psychology and neuroscience to social policies and education, all of which can offer distinct conceptualizations of what happiness really means and how it can be promoted. As an example of the expressed interest in the pursuit of happiness, political institutions currently monitor happiness as national accounts of well-being (Diener & Seligman, 2004; Helliwell & Putnam, 2004; Stiglitz, Sen, & Fitoussi, 2010; Veenhoven, 2002). Far from reaching a consensus, the many realms involved in the study of happiness create a fuzzy picture, with disagreements between the various areas and between people.

In the early years, research on happiness was characterized by small samples and simple methods of analysis, but in recent decades the incorporation of studies with larger and more representative samples, of longitudinal and experimental studies, and of more sophisticated approaches has enabled a large amount of knowledge to be built up in the field (Diener et al., 2018). Despite the wealth of contributions from

the last five or six decades, happiness remains a scientific field whose advancement still has a long way to go. One of the main obstacles in current research lies in the conceptualization of happiness. Differences in the definition of this term can lead to misconceptions and misleading comparisons across studies. Indeed, this field sometimes seems to be burdened by the interchangeable use of the terms happiness, [subjective and psychological] well-being, mental health or flourishing, which are far from rare in research. A frequently referenced statement on this issue is that happiness is a multi-faceted construct, "the meaning of which everybody knows but the definition of which nobody can give" (Freedman, 1978, cited in Lyubomirsky, 2001). This raises questions about the hierarchical position of happiness within the broader construct of subjective well-being. Because the concept at the core of this thesis is the construct of happiness, it seems crucial to disentangle the underlying distinctions [or commonalities] that define both concepts. The following section covers different conceptualizations of subjective well-being employed by researchers, and clarifies how the definition of happiness builds on the broader concept of subjective well-being within this thesis.

3.2. Happiness and well-being: same but different?

For the purpose of this thesis, a primary point concerns the understanding of what happiness means. Research and moral debates address the question of whether happiness and well-being can be understood as synonyms or whether they entail different notions. Hence, the distinction between them seems to be the first step towards understanding what happiness is. Well-being entails profound implications in the formal and informal context, not only because it has become the focus of various scientific domains, but also because it has a practical function for laypeople. In formal contexts, research on well-being can accurately address questions that, normally, would be difficult to answer by intuition alone (e.g., What is important in life? What contributes to human striving? How do people guide their lives?). In informal contexts, one may assume that laypeople use subjective well-being questions to gain access to information on how others are doing in their lives (e.g., How is your career going? How are your partner's/friends' relationships going? Did you enjoy your last trip?). In this case, when we want to know how well someone is doing in certain domains, we appeal to her or his well-being, wherein answers may often not be easy to provide. Practically, when we need to take important decisions (e.g., "I will change my job", "I want to have children", "I am getting divorced"), we

generally rely on our personal evaluations and take into account the expected level of happiness that such decisions will imply, be it in relation to income, family or career.

As explained in the upcoming section, although research shows that there is no widely accepted conceptualization of what subjective well-being consists in, we can agree that it is something good *for* people. If we cannot state the components of well-being, it becomes difficult [if not inconceivable] to directly measure it. Therefore, we need to indirectly measure other features that can potentially correlate with the components of well-being (Alexandrova, 2012). In his dissertation, Wren-Lewis (2014) wisely suggested that convergence in the measurement of subjective well-being and happiness can be twofold. First, insofar as happiness constitutes subjective well-being – that is, well-being can be explained through happiness – we could directly measure well-being by measuring happiness. Second, insofar as happiness is potentially correlated with the components of subjective well-being, we could indirectly measure well-being by measuring happiness in two different forms: happiness as the cause of well-being components (e.g., happy people perform better and therefore attain more accomplishments); and happiness as caused by subjective well-being components (e.g., a healthy life contributes to feeling good and therefore to being happy). In this sense, certain life conditions (higher income, education, health, etc.) may presumably contribute to our well-being. Public policies and psychological interventions will accordingly target those factors as a way to boost it (Helliwell & Aknin, 2018; Veenhoven, 1994; World Health Organization [WHO], 2004).

Diener (1984) claimed that the subjective nature of life evaluations represents a reliable approximation to the broader construct of well-being. It is important to note that objective circumstances also play a role in determining subjective well-being (Eckersley, 2001) and, despite the fact that those circumstances are weighed up differently depending on individual, social and cultural differences, subjective appraisals of those objective life conditions are an indicator of whether people are leading a *well-lived* life (Diener et al., 2018). In light of this, one may assume that well-being can be evaluated through happiness and, therefore, that happiness can be used as a proxy for well-being (Layard, 2005). As a standard of comparison, we accordingly understand that happy people are doing better than less happy people. More evidence supports the view that happiness can be treated as a proxy for well-being. For instance, since happiness is often used to define a broad and general sense of well-being in daily life, laypeople can use different terms (e.g., "being

depressed", "feeling excited", or "having a sense of emptiness") to informally denote more specific psychological states referring to how [un]happy one is (Haybron, 2003; Wren-Lewis, 2014).

Besides individual differences, happiness is also molded and influenced by contextual and cultural factors that are associated with national wealth, values, and norms (Diener, Oishi, & Ryan, 2013; Lyubomirsky, 2001; Uchida, Norasakkunkit, & Kitayama, 2004; Wissing & Temane, 2008). The cultural context regulates the meaning and the manifestation of emotional experiences, showing differences across cultures. For instance, Delle Fave et al., (2016) explored lay definitions of happiness across cultures and found that, regardless of the differences in the conceptualization of this term, inner harmony, family and social relationships appeared as common components of happiness. The reasons why happiness may not be equally highly endorsed across the globe differ, but research generally shows that Western cultures are more inclined to dampen positive emotions because they see happiness as less appropriate (for a review see Joshanloo & Weijers, 2013). According to Diener et al. (2018), "a path to greater happiness might differ across cultures" (p. 257). As such, one should be cautious when interpreting research findings that focus on happiness, and this fact reinforces the need to reach a scientific understanding about this construct.

Taking all the evidence into account, happiness can be defined as a relatively long-term psychological condition that accounts for the overall emotional state of a person. It includes experiencing at-the-moment pleasant emotions (being happy *in* life) as well as a sense of meaning and thriving in life (being happy *with* one's own life). This is the concept of happiness that I am concerned with in this thesis. Indications of happiness can be taken to mean an expression of how one subjectively experiences the world. Unavoidably, emotional experiences reciprocate with how one behaves and thinks about the [emotionally perceived] world. The measurement of happiness can therefore provide formal and informal monitoring of how well people's lives are going.

The following point offers a general overview of the most relevant models that account for happiness. It should be emphasized, though, that this thesis is not principally concerned with substantive disputes over the nature of happiness and well-being, and therefore providing a thorough review of all the theories of well-being and how happiness is embedded into them is not our fundamental concern. Nevertheless, we acknowledge that the controversy in the conceptualization of both constructs hinders the prospect of measuring happiness, so if progress is to be made

in the understanding of happiness, some of the most relevant attempts to conceptualize it should at least be examined in the first instance.

3.3. Defining happiness: lessons from classifications and taxonomies

The study of happiness involves different scientific avenues including psychology, biology, health, technology, politics and economics. The extensive literature about happiness in particular, and well-being in general, evidences the advances within this topic, which has mushroomed over the last two decades, reaching more than 170.000 scientific publications since 1999 (Diener, Lucas, & Oishi, 2018). Nonetheless, such a large amount of studies makes it difficult to reach a consensus on, for example, the definition, the structure, or a single overarching model to conceptualize happiness and well-being. For this reason, many scholars have argued that defining these concepts is a challenging task that may take many years to complete (Dodge, Daly, Huyton, & Sanders, 2012; D. Gilbert, 2006).

Accordingly, one of the most difficult issues that scholars face is defining what well-being is and clarifying how happiness fits into it[1]. A variety of research traditions provides different definitions of what happiness consists in, and also provides different components of well-being (with happiness being one of them). Disagreements about the definition and the components of well-being could lead to misunderstandings in the comparison of findings. For instance, theorists might agree that it consists in a good life for someone, others might argue that it is constituted by a positive balance between pleasure and pain, while certain others might argue that it is defined by the pursuit of virtue. It is important to specify the approach used to understand well-being in order to clarify its definition and the underlying position of happiness among the key components. In the remainder of this section, some of the most relevant approaches are presented. Generally, these approaches stem from the general notion of well-being. In an attempt to provide a congruent overview of the conceptualization of happiness, we have included a summarizing definition of how happiness can be understood according to the foundations of each approach.

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[1] Although discussed in the following point, for now we assume that subjective well-being and happiness concern different notions, with happiness commonly being a subsumed component under the general construct of well-being.

3.3.1. Marie Jahoda's model of mental health

The first attempt to provide a definition of mental health was articulated by Marie Jahoda (1958). Based on a comprehensive review of existing literature about clinical, personality and developmental psychology, Jahoda formulated the basic premise to conceptualize positive mental health beyond physical health. As she claimed, it is "unlikely that the concept of mental health can be usefully defined by identifying it with the absence of disease" (p. 14). Thus, within this model, physical health was presented as a necessary but not sufficient contributor, and despite the fact that she outlined that social aspects should be considered part of mental health, Jahoda's approach did not address it in a straightforward way. Nevertheless, her model was a pioneering work in the effort to understand mental health as a complex and multi-component construct. She proposed six different dimensions that should characterize any mentally healthy person: positive attitudes towards oneself (realistic self-acceptance and self-esteem), growth, self-development and self-actualization (self-directing one's behavior and being productive), environmental mastery (adapting to the environment and effectively facing life challenges), autonomy (regulating one's behavior), integration (internal balance and view of life) and accurate perception of reality (Jahoda, 1958). These six dimensions were included as a theoretical fact rather than an empirical finding; hence, Jahoda's model is considered the first proxy for positive mental health. As later models have developed more accurate and empirically based conceptualizations, some of the categorizing elements are also present in the foregoing models. For example, psychological well-being integrates the dimensions of self-acceptance, growth, autonomy and environmental mastery, as presented in the following point. If Jahoda's theory is taken as the basis, happiness can be understood as a defining characteristic of a good functioning of the mind in the appropriate social context, which, along with the absence of mental illness, identifies the state of mental health.

3.3.2. Hedonism (SWB) and Eudaimonia (PWB)

Although a growing portion of the literature is devoted to defining, measuring and promoting happiness, the study of the good life is far from new. Traditionally, two perspectives have been widely used to delimit different conceptualizations of happiness: the hedonic and the eudaimonic traditions (Ryan & Deci, 2001).

The hedonic tradition conceives happiness as the presence of pleasure and the absence of pain, therefore a *well-lived* life is pursued in terms of pleasure maximization and pain avoidance (Ryan & Deci, 2000). It is rooted in the Greek philosophers Aristippus and Epicurus, who respectively viewed the attainment of happiness and pleasure as the ultimate goal in life (Ng & Fisher, 2013), and that a pleasant life ought to be pursued with prudence (Epicurus, 1994). According to the hedonic tradition, happiness is constituted by the subjective experience of pleasure, wherein other aspirational aspects like life purpose, achievement or virtue have minimal instrumental value. Some scholars have criticized this approach for excluding key components of positive functioning, such as relatedness, autonomy, meaning in life, and also for representing an incomplete perspective of well-being (Deci & Ryan, 2008; Keyes & Annas, 2009).

The psychological construct associated with the hedonic perspective is known as hedonic well-being or Subjective Well-Being (SWB, Diener, 1984) and involves cognitive and affective judgments of life. More specifically, two components are taken into account: first, life satisfaction, which is considered the cognitive component of SWB and entails individual evaluations of how satisfied one is with one's own life; and second, the balance between positive and negative affect (or happiness; see Kahneman, 1999), which is considered the emotional component of SWB and entails evaluations of immediate affective states and experiences (Diener, Suh, Lucas, & Smith, 1999). Taking that into consideration, SWB is determined by the combined contribution of high levels of life satisfaction and a preponderance of positive emotions over negative ones. It is worth noting that the two components differ in a number of respects. On the one hand, life satisfaction is considered the least representative component of SWB because the evaluation of one's life conditions also includes eudaimonic elements (Deci & Ryan, 2008). Life satisfaction can be measured in two different ways: first, by asking respondents about their overall life satisfaction (Diener, 1984; Diener, Emmons, Sem, & Griffin, 1985); and second, by asking about their satisfaction with different life domains like health, security, interpersonal relationships, future, personal achievements, community belongingness and spiritual feelings (Cummins, 1998; Cummins, Eckersley, Pallant, van Vugt, & Misajon, 2003). On the other hand, positive and negative affect conform two independent variables (Diener & Emmons, 1984; Huppert & Whittington, 2003). The main difference between the two components lies in the fact that affect appraisals seem to be less stable over time than cognitive appraisals (Veenhoven, 1994). According to the hedonic tradition, happiness can be viewed as the emotional

component of well-being that carries the affective evaluations of one's life experiences. It is important to briefly note that the literature often refers to subjective well-being as the subjective evaluation of objective life conditions. This approach does not necessarily refer to SWB as understood by Diener (1984)[2].

The eudaimonic perspective asserts that passive hedonic pleasure is not enough for a complete experience of well-being, and it is premised on the idea that positive functioning comes from realizing human potential and meaningful activities (Ryff, 1989; Vittersø, 2016). This tradition stems from the Greek word *daimon* (true nature) and Aristotle's conception of happiness as a meaningful life based on human fulfilment through the expression of virtue (Ryan & Deci, 2001). Along this line of theorization, contrary to the hedonic perspective, happiness calls for certain objective qualities, such as goal setting, autonomy, meaningful relationships or virtuosity, therefore "eudaimonic theories do not assume that what is good to the person is necessarily good for the person" (Kesebir, 2018, p. 2).

Two different types of well-being are affiliated to the eudaimonic perspective: eudaimonic well-being or Psychological Well-Being (PWB; Ryff, 1989; Ryff & Keyes, 1995) and Social Well-being (SoWB; Keyes, 2002). PWB expresses how one is functioning psychologically in response to life demands, which includes – albeit arguably – instances of objective phenomena. PWB is widely recognized as the most used model of assessment within the eudaimonic approach (Vittersø, 2016). Indications of well-being are subsumed under six dimensions: self-acceptance (having positive attitudes towards oneself and accepting the multiple facets of the self), autonomy (being independent when taking decisions and evaluating the self), positive relations (having trusting, satisfactory and reciprocal relationships), purpose in life (having and nurturing beliefs of directedness in life), environmental mastery (having a sense of competence in managing the environment, along with making the most of opportunities), and personal growth (experiencing constant growth, improvement and openness to new experiences) (Ryff, 1989). On the other hand, SoWB reflects how one is functioning in regard to the social context. The achievement of well-being cannot just embrace the individual sphere. Instead, it must go beyond it because well-being is closely related to environmental variables

[2] For the sake of clarity, throughout this thesis the nomenclature SWB applies to the definition by Diener (1984), whereas the term subjective well-being will refer to the evaluation of one's own life from the subjective perspective – that is, how one subjectively experiences and evaluates one's own life. Although [general] well-being refers to a more general construct that includes measures of subjective and objective well-being (see point 3.3.4), within the thesis the terms well-being and subjective well-being will be interchangeably used without acknowledging their conceptual distinctions.

(Diener & Suh, 2000). As a result, Keyes (1998) proposed five components that broadly describe SoWB: social coherence (perceiving the world as logical and predictable, and with chances to build a meaningful life), social integration (feeling part of and supported by the community), social contribution (perceiving oneself capable of returning something back to the community), social actualization (having the perception that the world evolves, improves and allows personal and social progress), and social acceptance (seeing the world as not cruel, having positive attitudes towards others and accepting human complexity) (Keyes, 2005). Based on the eudaimonic tradition, happiness can be defined as the realization of one's true potential in the pursuit of a virtuous life, including positive elements of human functioning in the individual and social spheres.

The underlying differences between SWB and PWB have raised questions about subjectivity and whether well-being ought to be considered from the lens of the experiencing individual or from external observers (Ng & Fisher, 2013). Diener et al. (2018) considered that factors relating to subjective well-being should be defined and rated by respondents rather than by external observers. Notwithstanding, scholars agree that a comprehensive conceptualization of the complex construct of well-being should be construed considering both subjective experiences coming from the hedonic perspective and more objective determinants stemming from eudaimonic theories (Deci & Ryan, 2008; Ryan & Deci, 2001). This provides good reason to suppose, for the purpose of this thesis, that happiness should contain hedonic and eudaimonic aspects.

3.3.3. Deci and Ryan's self-determination theory

Some humanist authors, such as Carl Rogers and Abraham Maslow, have challenged the two psychological theories that dominated in the mid-20th century: conductivism and psychoanalysis. In opposition to them, the humanism movement emphasized the innate force of individuals towards self-realization rooted in the belief that everyone is inherently good by nature, and that efforts should be made to nurture true human potential and encourage it to flourish (Maslow, 1962; Rogers, 1961). In an attempt to provide empirical evidence for humanist theories, Ryan and Deci (2000) proposed the self-determination theory, whose fundamental basis claims that well-being is a consequence of optimal psychological functioning rather than a consequence of frequent pleasure. In this case, well-being is defined by adequate satisfaction of the basic needs of relatedness, competency and autonomy, as well as

a consistent system of goals. The three basic needs are considered the innate nutrients that are essential for intrinsically motivating people towards achieving mental health. In order to perform this condition, it is necessary that the social and cultural contexts facilitate people's sense of relatedness, competence and autonomy. Unlike previous humanist theories, this model has been scientifically supported (Deci & Ryan, 2008; Ryan & Deci, 2000). Based on the self-determination theory, happiness can be defined as the optimal functioning of individuals resulting from the satisfaction of relatedness, competency and autonomy, which are intrinsically pursued and externally facilitated by the social context.

3.3.4. Quality of life

Another approach that has largely attempted to define well-being and articulate the components underpinning the good life is the paradigm of Quality of Life (QoL). At the end of the 1990s, academics were questioning whether economic growth was a reliable indicator to completely represent national prosperity (Land, 1996). This view is now complemented by recent claims criticizing the decision utility approach, which asserts that well-being is fulfilled to the extent that preferences are satisfied in market behavior (Dolan, Peasgood, & White, 2008; Veenhoven, 2004). By that time, the social indicator movement was set to provide additional indicators besides monetary ones in the measurement of QoL (Bauer, 1966; Land & Michalos, 2018). The premise of the social indicator tradition is that objective life circumstances are subjectively appraised based on people's own standards, and thus subjective evaluations of life are to be accounted for in the assessment of QoL. The subjective social indicators movement has also been reflected in the context of children and adolescents. Efforts have been made to incorporate data on children's rights (Casas, 1997), and to use children's and adolescents' perceptions, evaluations and aspirations as indicators of well-being (Casas, 2011, 2019). As Diener and Suh (1997, p. 191) stated, "the analysis of a good society only in terms of market factors clearly deemphasizes important elements that influence the quality of life such as love, self-development, and possessing meaning in life". While psychosocial intervention at that time was focused on tackling difficulty, a change in the focus of action – from objectivity to subjectivity – began, and the consolidation of the QoL paradigm emerged (Casas, Rosich, & Alsinet, 2000).

Regardless of the current lack of consensus about the dimensionality of QoL, scholars agree that it is a multi-faceted and broad concept that embraces subjective

and objective domains, including indicators of cultural, social, physical and mental health (Land & Michalos, 2018; Veenhoven, 1996). Objective factors are determinant for people's well-being; nonetheless, individual mechanisms such as motivation, cognitive or emotional processes undoubtedly mold the perception of objective factors across individuals and groups (Lyubomirsky, 2001). Within this tradition, well-being has been a matter of interest concerning individual and social issues (Casas, 1989), similar to the eudaimonic approach. One of the most agreed definitions of QoL was provided by Cummins (1997, p. 6):

"Quality of life is both objective and subjective, each axis being the aggregate of seven domains: material well-being, health, productivity, intimacy, safety, community, and emotional well-being. Objective domains comprise culturally-relevant measures of objective well-being. Subjective domains comprise domain satisfaction weighted by their importance to the individual."

Although a comprehensive and assured assessment of QoL should integrate a combination of subjective and objective evaluations (Costanza et al., 2007; Emerson, Hatton, Thompson, & Parmenter, 2004), some authors have suggested that SWB should be the starting point of QoL, given that SWB considers life judgments as constituent elements of QoL (Phillips, 2006, as cited in Ng & Fisher, 2013). Accordingly, SWB and QoL may somehow be used interchangeably. However, one should be cautious when distinguishing between the two concepts – while SWB focuses on the optimal functioning at the individual level, QoL does so in multiple life domains. Therefore, SWB (and thus happiness) may be seen as a sub-dimension integrated within QoL which is mainly based on internal judgments of external events and circumstances (Ng & Fisher, 2013).

To conclude, both QoL and SWB domains are necessary and complementary to promote well-being at an individual and social level, yet the two approaches may interact with different sources of information and thus meet distinct standards of practice. This doctoral thesis mainly concerns the subjective, narrower facet of QoL that takes into account personal evaluations of how one's life is going – that is, the subjective experience of well-being. Taken together, from the QoL approach happiness can be considered the individual evaluation of one's quality of life or, simply put, the subjective perception of life conditions.

3.3.5. Two continua model of mental health and the tripartite model

Psychology has historically been concerned with understanding illness and disease, and their corresponding treatment. The Diagnosis and Statistical Manual (DSM) of mental disorders (American Psychiatric Association [APA], 2013) represents the cornerstone of a psychology based on the biomedical approach that tries to identify and remedy psychopathology. This view of psychology emphasizes the presence (and strives for the absence) of negative qualities or states of mind. But at the same time, it disregards the presence of positive qualities or states of mind that may ultimately lead to a complete state of mental health.

Historically, three approaches have guided the evolution of defining mental health. First, the *pathogenic approach* (from the Greek term *pathos*, meaning human suffering) understood mental health as “the mere absence of disease, disability and premature death” (Keyes, 2009, p. 89). Second, the *salutogenic approach* (from the Latin term *salus*, meaning safety or health) claimed the existence of not only pathogenic factors responsible for illness but also salutogenic factors responsible for causing and maintaining positive health (Antonovski, 1978; Strümpfer, 1995). Accordingly, illness is not the opposite of normality but the opposite of positive health, which equates the presence of positive states of human functioning with thoughts, feelings and behavior. And third, the *complete state model* (from the Greek term *hale*, meaning whole or complete) merged the two previous approaches and defined mental health as a complete state consisting of the presence of positive states of human capacities and functioning as well as the absence of psychopathology (World Health Organization [WHO], 2001). The complete state model matches the WHO’s definition of mental health, which has gradually included modifications to meet the social and scientific demands since its first introduction in 1948. Currently, mental health refers to a complete well-being state in which people are aware of their own capacities, face daily stress, work productively and contribute to their community (WHO, 2004).

After including the social dimension as a constituent component of mental well-being, Keyes (2005) developed the tripartite model of mental health. The tripartite model entails an integrated framework that embraces SWB, PWB and SoWB as constituent elements that provide a comprehensive conceptualization of mental health (Keyes, 2002, 2005, 2013). This model aimed to identify mental health by using the same diagnostic criteria employed to identify psychopathology in the DSM-III-R (APA, 1987). Symptoms were categorized within two broad dimensions: hedonia and

positive functioning (eudaimonia), paralleling the anhedonia and malfunctioning dimensions characterizing major depression. The assessment from the lens of the tripartite model of mental health offers a categorical interpretation of the results with three possible psychological states: flourishing, languishing and moderately mentally healthy. Flourishing equates to the highest level of mental health in which people experience a fulfilling and meaningful life. Languishing entails a state of stagnation that indicates the absence of mental health but not necessarily the presence of mental illness. At this level, we would find incomplete mental health with absence of *salutogenic* factors. Individuals who do not meet either of the previous descriptions are labelled as moderately mentally healthy, that is, neither flourishing nor languishing (Keyes, 2002).

A relevant point is that the literature often indistinguishably uses the terms well-being, mental health or flourishing as a representation of optimal human functioning (Huppert, 2009a; Ryff & Singer, 1998). Based on the two continua model of mental health, the presence of flourishing indicators along with the absence of psychopathology symptoms compute the whole picture of what we understand as complete well-being (Keyes, 2002; Westerhof & Keyes, 2010). Combining the approaches of mental health and mental illness, practitioners are able to establish health promotion-based interventions and illness prevention-based programs. As one of the most valuable contributions to the literature, the tripartite model bridged the hedonic and eudaimonic perspectives. This approach was a significant advance in the operationalization of well-being within the framework of mental health, and has become the cornerstone of research examining the nature and correlates of happiness. Hence, more detailed psychometric elucidations of the composition of this model are discussed in the following sections.

Analysis of the structure of the tripartite model across different cultures revealed that the three dimensions (SWB, PWB and SoWB) are distinct yet related components of mental well-being (e.g., Gallagher, Lopez, & Preacher, 2009; Joshanloo, Wissing, Khumalo, & Lamers, 2013; Karaś, Cieciuch, & Keyes, 2014; Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011; Rogoza, Truong Thi, Różycka-Tran, Piotrowski, & Żemojtel-Piotrowska, 2018). Nevertheless, there are some disagreements about the redundant correlations between SWB and PWB, which would indicate that they are a single component rather than two separate ones (Joshanloo, 2017). These high correlations may be result of the methodological approach (i.e., Confirmatory Factor Analysis [CFA]). CFA has been methodologically questioned for producing inaccurate results in the dimensionality of constructs (Marsh, Morin, Parker, & Kaur, 2014, cited in

Joshanloo, 2017) and hindering the measurement of mental well-being (Joshanloo, Bobowik, & Basabe, 2016). Recent studies have employed new emerging measurement approaches to overcome such limitations. For instance, Joshanloo (2017) applied Exploratory Structural Equation Modeling (ESEM, Asparouhov & Muthén, 2009) to investigate the underlying structure of mental health. ESEM allows construct indicators to load onto all factors by relaxing the correlation constraints present in CFA. By this means, inflated correlations are handled (Brown, 2015; Marsh et al., 2014) and more accurate inferences about discriminant validity can be drawn (Joshanloo, 2017). ESEM studies in the field of mental health have supported Keyes' tripartite model, revealing significant cross-loadings between PWB and SWB (Joshanloo, 2017; Rogoza et al., 2018) and a greater distinction between hedonia and eudaimonia than originally expected (Joshanloo et al., 2016). In keeping with the foregoing, Rogoza et al. (2018) demonstrated that the structure of the tripartite model was best represented by a bifactor ESEM model, which indicates that the tripartite model operationalizes the construct of mental health by integrating the three different dimensions, each of them representing specific types of well-being that, at the same time, contribute to general mental health. Similarly, Wissing and Temane (2008) showed that mental well-being, understood as a combination of hedonic and eudaimonic measures, followed a hierarchical structure in which a general component of well-being was composed of two sub-factors: "intra and interpersonal well-being" and "self-efficacy or behavioural readiness". These results are in line with previous research interpreting hedonia and eudaimonia as two distinct empirical entities that ought to be measured separately and considered part of a more generic well-being construct (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011a; Keyes & Annas, 2009; Waterman, 2008).

As a further step in the investigation of well-being dynamics, scholars have explored the prospective inter-relations underlying hedonia and eudaimonia. Longitudinal findings overall showed that both PWB and SoWB predicted higher levels of PWB, SoWB and SWB over time, whereas SWB predicted future SWB but not PWB and SoWB (Joshanloo, 2019; Joshanloo, Sirgy, & Park, 2018). That is, gains in psychological and social adjustment may contribute to a pleasant and meaningful life; however, momentary hedonic pleasure may contribute to future hedonic pleasure but not to a sense of optimal psychosocial functioning over time. These findings suggest that hedonia and eudaimonia are both necessary to well-being, with eudaimonia being more beneficial in the long-run (Joshanloo, 2019; Joshanloo et al., 2018).

According to the two continua model of mental health (and therefore the tripartite model), happiness can be understood as an indicator of the mental well-being continuum, which, along with the absence of indicators of the mental illness continuum (e.g., depression), conforms the complete state of mental health. It should be noted that this definition is very similar to the one in Marie Jahoda's model, as it was the first attempt to define mental health.

3.3.6. From Authentic Happiness to PERMA

Seligman (2002) proposed a descriptive model, the "Authentic Happiness model", to integrate and structure previous models of well-being. This model intended to describe different ways of attaining a happy life rather than substantially prescribing what the best way was. On this basis, one could experience happiness through three orientations. First, the *pleasant life* defines a happy life as based on plenty of positive emotions [over the lower presence of negative emotions]. The primary aim of this orientation is consistent with the hedonistic view of experiencing as much pleasure as possible. Second, the *engaged life* denotes that a happy life comes from using one's personal strengths to experience the optimal state of performance (e.g., flow). This orientation is related to personal values in order to identify personal resources and opportunities. And third, the *meaningful life* consists of having a sense of purpose in life and setting goals that go beyond oneself in order to pursue happiness. Being most representative of the eudaimonic view, this orientation appeals to dedication to others and to the establishment of personal and social purposes.

In light of various deficiencies underpinning the "Authentic Happiness model", Seligman (2011) introduced a new multi-dimensional model of subjective well-being. With the acronym of PERMA, this model articulated five intrinsically rewarding components that are necessary to flourish in life: positive emotions (equating to the *pleasant life*, referring to hedonic pleasure); engagement (equating to the *engaged life*, referring to a psychological connection to activities); relationships (introduced as the social connector component); meaning (equating to the *meaningful life*, referring to feeling connected to the social context); and accomplishment (introduced as the element to track progress towards goals). Seligman claimed that all these components were measurable in nature and therefore able to provide a final account of how one is thriving in life. The PERMA model includes elements of feeling good and functioning well (i.e., hedonism and eudaimonia). A fundamental

conception of PERMA is that people's character strengths are the underpinning element connecting the model's five components, which reflect a more current definition of mental health (WHO, 2004). The measurement of subjective well-being from the lens of the PERMA model and of SWB yielded no differences, suggesting that both propositions capture a general construct of subjective well-being (Goodman, Disabato, & Kashdan, 2017).

Within the PERMA model, happiness can be understood as something more than a mere search for hedonic pleasure. Indeed, it also entails the presence of engagement, positive relationships, meaning and accomplishment. It overlaps to some extent with the eudaimonic perspective and Keyes' tripartite model due to the components of feeling good and optimal levels of individual and social functioning.

3.3.7. Disentangling overlapping terms and further clarifications

The above approaches entail different conceptualizations of the notion of well-being. Despite the interchangeable use of the terms mental health, happiness, life satisfaction or quality of life, research suggests mental health can be understood as a component of QOL involving the facets of life satisfaction and happiness (Brown, Bowling, & Flyn, 2004). Some differences can be found between some of these components. First, happiness is regarded as the preponderance of positive affective states over negative affective states (Bradburn, 1969; Lyubomirsky, King, & Diener, 2005), whereas life satisfaction and mental health are multicomponent cognitive-based judgments (Brown et al., 2004; Diener, 1984). Second, happiness seems to be less stable over time than life satisfaction and mental health (Veenhoven, 1994), although a recent study has found that happiness showed more within-person stability than life satisfaction and mental health (Bieda et al., 2019). This provides more evidence for the need to disentangle the differentiation of well-being-related constructs. There seems to be an upward spiral between happiness, life satisfaction and mental health – that is, these components showed a longitudinal inter-relationship in which, notably, the reciprocal association of mental health was stronger with happiness than with life satisfaction (Bieda et al., 2019). This upward spiral of positivity suggests that gains in happiness lead to substantial increases in life satisfaction and mental health over time, and vice versa.

One of the most significant current discussions in philosophical and psychological research is the empirical distinction of happiness and well-being. More specifically, whether happiness is a synonym of subjective well-being or rather a

component subsumed under the construct of subjective well-being. In a study that attempted to determine the hedonic and eudaimonic components of happiness, Delle Fave, Brdar, Freire, Vella-Brodrick, and Wissing (2011) proposed a mixed model approach including quantitative and qualitative data to determine the content (the *what*) and context (the *why*) of happiness. The content facet referred to the internal dimension of happiness (e.g., psychological structure of happiness) and included elements like harmony, emotions, health or achievement; whereas the context facet referred to situational dimensions of happiness (e.g., life domains related to happiness) and included domains like family, friends, work or leisure. The results from this exploratory study showed that happiness was defined as a psychologically balanced state of harmony and inner peace including both hedonic and eudaimonic aspects, with the latter being more prominent. The strongest accounts were found with family, interpersonal relationships and health, while spirituality, society and community were the least ranked elements contributing to happiness. These results supported previous theories highlighting the importance of the relational aspect, particularly intimate and close relationships, as constituent sources of well-being (Ryan & Deci, 2000; Ryff, 1989). Other important aspects were also included in the definition of happiness, such as engagement, fulfilment, meaning, positive emotions and satisfaction, among others (Delle Fave et al., 2011b).

Recent research has proposed a new model of positive mental health that incorporates elements related to QOL, such as neurophysiological and neurochemical responses, life evaluations compared to different standards (own and other people's lives) or socio-ecological resources and constraints (Sirgy, 2019). This hierarchical perspective constitutes one of the most aggregated conceptualizations of positive mental health, guided by the notion of positive balance at different levels of analysis – that is, a preponderance of desirable rather than undesirable characteristics. In his formulation, Sirgy (2019) proposed positive mental health as a preponderance of positive over negative features at the physiological (neurochemical), emotional (affect), cognitive (domain satisfaction), meta-cognitive (evaluations of one's life compared to other standards), developmental (psychological traits) and socio-ecological (social resources) levels. That proposal represents an attempt to integrate, in a more comprehensive manner, findings from different fields to arrive at a substantive definition of mental health.

To draw clear conclusions, the central concept of this dissertation builds on the shared preference of using happiness as the overarching descriptive term to refer to the subjective experience of well-being. Helliwell and Aknin (2018) provided a

number of arguments in favor of this position. First, although some scholars have asserted that happiness might relate to different concepts across different cultures (Oishi, Graham, Kesebir, & Galinha, 2013), it can be argued that happiness is a widely recognizable term that facilitates a shared understanding among a broader audience. Second, evaluations of how happy people are with their lives as a whole require respondents to think about many aspects surrounding a *well-lived* life. And third, happiness captures the originating as well as the maintaining factors of positive states of mind. As alluded to in the second and third sections of this thesis, the concept of happiness can adequately be defined as a psychological condition that accounts for the overall emotional state of a person over a relatively long period of time (Wren-Lewis, 2014). To avoid theoretical discussions about the nature and the constitution of happiness within subjective well-being models, this thesis is concerned with the following conceptualization: happiness can be conceived as an indicator of how one emotionally experiences the world. Put differently, happiness is a proxy to measure how well life is going, based on one's judgments about what is important in life.

3.4. How can we measure happiness?

The evaluation of well-being judgments is crucial for basic research focused on understanding the mechanisms and correlates of happiness, and for contexts interested in informing public policies (Hudson, Anusic, Lucas, & Donnellan, 2017). Akin to reaching a consensus on the definition of the term happiness, another prominent task scholars endeavor to pursue is that of providing reliable measurement tools. Given the large amount of instruments available in the literature and the differing results they can yield, a further task concerns the scientific study of how different measures relate to each other (e.g., happiness) and their mapping onto theoretical models of subjective well-being (Diener et al., 2018).

A shared standard in the study of happiness is that it denotes subjective evaluations of overall life and, therefore, it needs adequate methods to capture them. Subjective evaluations of happiness can be obtained in two different ways: asking for a general evaluation of one's quality of life (global well-being), and repeatedly asking about moment-to-moment levels of happiness to collect an averaged rating (experiential well-being) (Diener et al., 1999). These approaches are covered in the following sections.

3.4.1. Self-report measures

Investigating the psychometric properties and adequacy of psychological measures is a continuing concern at the core of research. The realm of happiness, claimed to be subjective in nature, has mostly relied on self-report survey-based measures of global well-being evaluations (Baumeister, Vohs, & Funder, 2007), which by definition denote an overall appraisal of one's life as a whole. From this perspective, it is believed that respondents can provide information about their emotions that is only accessible from their own positions. Because they imply a general overview, subjective well-being evaluations are thought to be relatively stable over time (Campbell, 1981). Many studies have largely examined the reliability and validity of self-reports. Overall, subjective well-being self-reports have good reliability over short periods of time, as long as there are no major life changes (Schimmack & Oishi, 2005). They also show a convergent validity between self-reports and informant-reports, since the levels of self-assessed happiness are generally similar to the levels of happiness appraised by external informants like family members or friends (Sandvik, Diener, & Seidlitz, 1993; Schneider & Schimmack, 2009). In their cross-cultural study, Bieda et al. (2017) demonstrated that some positive constructs, such as happiness, life satisfaction, mental health, social support, optimism and resilience were universal across various nations. The interpretation of this finding implies that respondents generally understand those constructs in a similar manner regardless of cultural background.

However, a classic problem in scientific measurement refers to the likelihood of biases. It could also be that people self-defeat or are unwilling to provide honest evaluations when asked how satisfied they are with their lives (Diener et al., 2018). Indeed, self-serving attributional biases, defined as the tendency to engage in positive illusions about oneself, are a widespread phenomenon of human cognition (Mezulis, Abramson, Hyde, & Hankin, 2004; Taylor & Brown, 1988). Likewise, subjective well-being responses seem to rely more on instant and quick judgments than on thorough ones. Consequently, people may dismiss relevant information (Robinson & Clore, 2002). It has been argued that subjective evaluations may be biased by irrelevant information that people would normally not weight highly in life judgments, notably mood or weather changes (Schwarz & Clore, 1983). Some authors have determined that, despite being perceptible, mood or weather fluctuations do not represent a major concern in the assessment of subjective well-being judgments (e.g., Lucas & Lawless, 2013; Yap et al., 2017). In sum, these results

demonstrated that the validity and reliability of self-report measures are not threatened by transient factors, and biases are not very likely to interfere or dampen true judgments of happiness.

Another fundamental issue concerns the way emotional information is recorded and retrieved when it comes to evaluating life conditions. Self-reports generally require retrospective judgments, and it seems that people do not aggregate information accurately to respond to general-domain questions, presumably due to temporal biases. For example, while people disregard the duration of a life experience when evaluating it, their judgments tend to be biased by the intensity of the feelings reported at the beginning and at the end of the experience (Fredrickson & Kahneman, 1993; Redelmeier & Kahneman, 1996). Kahneman (1999) proposed a possible solution to that: implementing measures of experiential well-being. Although self-reports seem to capture relevant information about one's overall evaluation of quality of life, various methods have emerged in an attempt to provide alternatives to self-rating measures.

3.4.2. Experiential measures

Experiential measures of well-being rely on momentary affective experiences that are evaluated over a period of time and then aggregated in an individual rating (Kahneman, 1999; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). As difficult as it may be to accurately capture emotional [fleeting or stable] states, asking questions like these in real time (e.g., how happy do you feel right now?) and then accumulating responses over an extended period of time will provide an objective single measure of happiness. This approach claims that experiential well-being can be easily accessible and is less contaminated by cognitive biases (Kahneman, 1999; Robinson & Clore, 2002). This would allow researchers to understand the dynamics of happiness because they could track the fluctuations of the moment-to-moment ratings. This approach is known as Experience Sampling Method (ESM) or Ecological Momentary Assessment (EMA; Shiffman, Stone, & Hufford, 2008). Experiential measures of well-being need the support of technological devices, such as smartphones, physiological sensors or daily diaries, all of which drain respondents' attention and availability to continuously respond to a barrage of questions (Shiffman et al., 2008). This burden hinders the possibility of applying experiential measures in large and representative samples. As a consequence, the Day Reconstruction Method (DRM) was introduced to overcome such limitations

(Kahneman et al., 2004). In the DRM, respondents are asked to divide the day into specific moments or activities, and then rate the feelings that emerged in each activity recalled throughout the day. Studies have supported DRM as a valid tool (Kahneman et al., 2004), which is highly correlated with measures of ESM (Bylsma, Croon, Vingerhoets, & Rottenberg, 2011; Kahneman et al., 2004).

Although DRM-based measures have been questioned due to the influence of heuristics and unclear psychometric properties (Diener & Tay, 2014), a recent study sought to determine the comparative evaluation of self-reports and experience evaluation measures (Hudson et al., 2017). The results indicated that self-report and DRM measures had similar psychometric properties and thus both can be used to provide a reliable overall assessment of people's subjective sense of well-being.

3.4.3. Other measures

With the call for more objective measures of subjective well-being, research has advocated for other innovative methods underpinning physiological measures and brain imaging, considered a more sophisticated and objective measurement of perceived experiences (Calvo & D'Mello, 2010). An example of that is the use of facial expressions and electroencephalograms (EEG) to measure emotion-evoked brain activity (Davidson, Ekman, Saron, Senulis, & Friesen, 1990; Ekman, Friesen, & Davidson, 1990). More recent approaches have focused on big-data and social media language to ascertain the judgment processes underlying well-being. For instance, Twitter language (Eichstaedt et al., 2015) and Facebook status updates (Chen, Gong, Kosinski, Stillwell, & Davidson, 2017) may emerge as an encouraging alternative for tracking fleeting affective information, while nevertheless considering the possible influence of desirability and [lack of] representativeness. Although assets used to measure biological indicators can be burdensome and expensive, current more cost-effective devices for assessing physiological changes are commercially available and usable in non-laboratory environments (Yetton, Revord, Margolis, Lyubomirsky, & Seitz, 2019).

Overall, psychophysiological measures seem to be a potential alternative for objectively collecting subjective evaluations of life. Nevertheless, the combination of subjective and objective measures seems to be the most suitable scenario for asserting individual judgments of happiness, since the unilateral use of physiological data is unlikely to replace self-reports (Diener, Lucas, et al., 2018; Yetton et al., 2019). A study proposed a multidimensional model to evaluate happiness by using psychophysiological measures, namely physiological arousal, life satisfaction and

emotional valence (Pietro, Silvia, & Giuseppe, 2014). Thus, assuming that happiness experiences stimulate (physiological arousal), generate positive emotions (emotional valence) and contribute to maintained levels of satisfaction (life satisfaction), researchers can calculate happiness and create a map of the affective states in a three-dimensional space.

So far, this section has presented several techniques to assess happiness in different ways. Although the optimal condition for researchers would be a combination of subjective and objective techniques to measure happiness, this conception is [frequently] overly idealistic and barely tenable in most cases. Together, the results support the use of self-rated measures in the study of happiness, and view self-reports as a tenable tool for approaching subjective evaluations of one's life.

3.5. Why is it necessary to study happiness?

Despite all the knowledge highlighting the significance of happiness studies, one may ask why it is important to keep enriching this line of research. Nearly everyone seeks happiness (Diener, 2000), and the pursuit of happiness depends to a large extent on personal decisions beyond genetic baseline or environmental factors (Sheldon & Lyubomirsky, 2006). In their book, Vazquez and Hervás (2014) paraphrased the somatic marker hypothesis of Damasio (1994, 2001) to argue the existence of a well-being marker. As a self-regulator mechanism, the main function of this well-being marker might be to identify current affective states so as to guide future-oriented plans and actions. Well- or ill-being signals (e.g., happiness or sadness) would allow for adherence to current life plans or, conversely, for deviation from them and the setting of different goals in an attempt to promote well-being. According to this proposal, we can understand happiness as a guidance point that strongly influences decision-making.

People take different decisions in this process. As argued by Layous and Lyubomirsky (2014), one may think that changes in life circumstances like purchasing materialistic goods, moving abroad or getting married might prospectively change one's happiness status. Nevertheless, those changes seem to exert less impact in the long run than one might presumably think, mainly because people tend to adapt to life circumstances. Moreover, the effect of those changes fades once they are embedded into daily routines (Lucas, Clark, Georgellis, & Diener, 2003; Luhmann, Hofmann, Eid, & Lucas, 2012). This mechanism is known as *hedonic adaption*

(Lyubomirsky, 2011), and it has drawn the attention of researchers for several years as it is thought to be one of the greatest barriers to sustained happiness. In contrast to this claim, other authors have suggested that happiness levels can change over time (Fujita & Diener, 2005). Carrying out easy practices involving cognitive and behavioral changes in daily routines have a greater effect on happiness (Bolier et al., 2013; Emmons & McCullough, 2003; O'Connell, O'Shea, & Gallagher, 2016; Proyer, Gander, Wellenzohn, & Ruch, 2015), although there are some disagreements about the extent to which such changes are subjective (White, Uttl, & Holder, 2019).

There is a latent academic discussion about the influence of genetic, contextual and individual differences on people's levels of happiness. Genetic factors play an important role in this process, yet empirical findings regarding the estimates of genetic heritability of happiness are still mixed (Bartels, 2015; Lykken & Tellegen, 1996). Environmental characteristics like age, country or socioeconomic level seem to moderate the relationship between genetics and happiness (Helliwell & Aknin, 2018; Lykken & Tellegen, 1996; Nes & Røysamb, 2017; Røysamb & Nes, 2018). The influential pathways of genetic and environmental factors differ in that genetics contribute to the stability of happiness across time, whereas the environment plays a role in the changes of happiness levels (Nes & Røysamb, 2017; Røysamb & Nes, 2018). Although this academic debate is beyond the scope of this thesis, it is important to note that the study of genetic, environmental and personal factors is a promising line of research.

Since subjective well-being can be tackled from various domains (Diener & Suh, 1997), it is not just psychology that is at the core of this field. Indeed, a wide range of professionals from other fields are convinced of the need to establish an empirically based perspective of happiness. If all this evidence is not enough to claim the importance of studying subjective evaluations of happiness, then it is important to highlight that the Sustainable and Development Goals report introduced ensuring (mental) health and well-being as a fundamental point within the 2030 Agenda (United Nations, 2019). The study of subjective experiences of well-being is likely to become necessary to lead not only a healthy life but also a purposeful existence (Ng & Fisher, 2013). A clear advancement in the noted proliferation of happiness across several disciplines is that, in 2012, the United Nations Development Solutions Network released the World Happiness Report, a yearly ground-breaking survey ranking 156 countries across the globe based on six main variables that support well-being: healthy life expectancy, social support, freedom, trust, generosity and income (Helliwell, Layard, & Sachs, 2019). The systematized collection of well-being data

provided by the World Happiness Report drew international attention from the first moment, by putting happiness center stage for governments and social policies (Helliwell & Aknin, 2018). Without sustained collaboration between interdisciplinary researchers providing and managing data, and policy makers designing and implementing services to lead good lives, the scientific gains of happiness might fall on deaf ears (Helliwell, 2018). In the words of Honourable and Kirby (2007, p. 17): "mental health and well-being is everybody's business."

An additional point that speaks in favor of happiness studies concerns the effectiveness of interventions that promote subjective well-being at the individual level (e.g., Bolier et al., 2013; Hendriks, Schotanus-Dijkstra, Hassankhan, Joop De Jong, & Bohlmeijer, 2019; Sin & Lyubomirsky, 2009; White, Uttl, & Holder, 2019). People now have the possibility to know caveats and strategies to lead a meaningful life. For example, by counting blessings (Emmons & McCullough, 2003), performing acts of kindness (O'Connell et al., 2016), expressing one's gratitude (Emmons & Stern, 2013; Luisa Martínez-Martí, Avia, & José Hernández-Lloreda, 2010; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011), or applying one's psychological strengths (Proyer et al., 2015). All these practices that attempt to promote happiness have the advantage of being easily translated into intentional daily life routines. Current research has demonstrated that happiness-boosting interventions work, the main challenge now lies in investigating the optimal conditions under which those interventions are most effective (Layous & Lyubomirsky, 2014).

Based on empirical findings, Lyubomirsky and Layous (2013) proposed the positive-activity model to identify the characteristics that enable a happiness-increasing intervention to be most successful. The model is grounded on the assumption that the performance of positive activities prompts positive emotions, thoughts, behaviors and psychological needs' satisfaction, which in turn boost subjective well-being. Based on the positive-activity model, the success of happiness-boosting interventions may depend on the person-activity fit*,* suggesting that *not one size fits all* (Lyubomirsky & Layous, 2013). Simply put, the efficacy of happiness-boosting activities on subjective well-being may be mediated by the characteristics of the activity *per se* (e.g., dosage, variety or social support) and the characteristics of the person performing it (e.g., motivation personality, efficacy beliefs or demographics). This model states that the prescription of a positive intervention should take all these elements into account, and it may not always be the same for different people. For example, participants who engaged voluntarily in self-selected happiness activities reported greater gains in well-being than those

who did not self-select the activities (Dickerhoof, 2007; Sin & Lyubomirsky, 2009). Participants who engaged in a gratitude activity (e.g., counting blessings) reported more gains when the activity was performed once a week instead of three times a week (Lyubomirsky, Sheldon, & Schkade, 2005). Lyubomirsky and Layous (2013) discussed the implication of implementing positive activities in practice settings like psychotherapy or counselling. Although a combination of pharmacotherapy and cognitive behavioral therapy has shown encouraging results in improving mental health in people with depression, the practice of happiness-increasing activities is expected to help roughly 70% of reported cases that have not received the appropriate level of treatment (National Institutes of Health & National Institute of Mental Health, 2008).

Another aspect that deserves attention is that subjective well-being is not only malleable in the individual sphere but also in the societal sphere (Tay & Kuykendall, 2013). As such, the traditional view of progress based on economic indicators has opened the way for new indicators that track societal progress, as alluded to in previous sections. National growth also involves taking into account people's and nations' well-being (Diener & Seligman, 2004; Veenhoven, 2002). Accordingly, policy makers are called upon to translate research into practice and take an active step in the challenging scenario of well-being by developing and implementing policies that help to promote happiness across several domains. Based on the recommendations of the Organization for Economic Co-operation and Development (OECD, 2013), the European Commission (EC, 2009) and the Stiglitz Commission on the Measurement of Social and Economic Progress (Stiglitz et al., 2010), countries are now including self-report measures of happiness as part of societal progress (O'Donnell, Deaton, Durand, Halpern, & Layard, 2014). In that case, institutions might be involved at a larger societal level (i.e., local communities, economic entities, social administrations, cities, countries, companies and organizations, etc.) (Diener & Suh, 1997). And despite the novelty of this area, research has shown encouraging results relating to the domains that have considerable impact on national subjective well-being. For instance, income support programs, healthcare quality and green space promotion are some of the features characterizing happy societies (for a detailed review see Diener, Oishi, & Lucas, 2015). Similarly, Diener, Ng, Harter and Arora (2010) suggested that satisfying the basic psychological needs of competence, relatedness and autonomy (Ryan & Deci, 2000) was a better predictor of positive functioning than income.

Altogether, national accounts of subjective well-being have proved to be a reliable indicator for tracking happiness across nations and offering valuable information to decision makers when it comes to devising new policies (Diener & Suh, 1997; Veenhoven, 2002). Academics have the opportunity to use measures of social advancement and provide notable insights to assist not only individuals in their daily lives, but also policy makers in an attempt to build a complete welfare state (Casas, 1997; Diener & Suh, 1997). As a guiding point in the research of well-being, Helliwell and Putnam (2004) claimed that "a *prima facie* case can be made that the ultimate 'dependent variable' in social science should be human" (p. 1435). A comprehensive review about why and how the study of happiness is scientifically worthy was carried out by Norrish and Vella-Brodrick (2008), who provided evidence of the pros and cons of appropriate interventions for promoting happiness.

In sum, the study of happiness has witnessed exciting developments in terms of knowledge about what constitutes a *well-lived* life, the pathways by which genetic, social and individual processes contribute to happiness, how to make the most of an intentional strategy to boost happiness, or how such strategies can be transferred at a broader societal level. All these advancements are thanks to the efforts made from complementary approaches, with some of them being more advanced and sophisticated (e.g., genome-wide complex trait studies, or multi-national representative samples). But, ultimately, there are several important areas where the study of subjective well-being has made original contributions to the importance of promoting happiness among individuals and societies.

3.6. Is happiness always good?

Regardless of the wide array of benefits stemming from happiness, it is worth mentioning that high levels of happiness are not always beneficial and may lead to suboptimal outcomes and undesired consequences (Gruber, Mauss, & Tamir, 2011). Some examples illustrate a decrease in creativity (Gruber et al., 2011; Rego, Sousa, Marques, & Cunha, 2012), a greater probability of undertaking risky behaviors (Cyders & Smith, 2008), and lower income and grades compared to not-so-happy peers (Oishi, Diener, & Lucas, 2007). Similarly, the presence of negative states of mind or negative emotions are not necessarily related to adverse outcomes, but instead they may contribute to building interpersonal connections and social bonds and increase cooperation (Bastian, Jetten, & Ferris, 2014). It should be noted, though, that such

associations are dependent on specific cultural and social contexts (Gruber et al., 2011; Joshanloo, 2018b).

Biswas-Diener and Wiese (2018) reviewed three lines of theorization to explore how excessive happiness might be troublesome: (a) the *affect-as-information theory* lies behind the assumption that emotions carry useful information on how to respond to environmental demands (Schwarz & Clore, 1983), thus avoiding negative emotions in the constant search for sustained happiness could dampen optimal functioning; (b) the *valuing happiness theory* describes how the tendency to overvalue happiness leads to unrealistic happiness goals, and the non-achievement of such goals potentially results in feelings of disappointment and loneliness (Mauss, Tamir, Anderson, & Savino, 2011). Indeed, highly valuing happiness has been associated with depression (Ford, Shallcross, Mauss, Floerke, & Gruber, 2014). Finally, (c) the *affective forecasting* theory outlines how having excessively optimistic expectations and undermining the potential effects of negative events can be detrimental (Schacter & Addis, 2007). Such inaccurate emotional predictions might lead to feelings of discouragement and frustration when reality does not equate to expectation (O'Brien, 2013).

Studies about the correlates of happiness commonly regard the happiness-outcome relationship as linear. However, two theories posit that the happiness-outcome relationship should be considered non-linear. First, the *inverted-U curve* illustrates how happiness, after reaching a certain point, stops being beneficial and becomes detrimental. And second, the *diminishing returns curve* is similar to the previous one, but less severe, and postulates that happiness levels above the optimal threshold do not necessarily undermine other outcomes (Biswas-Diener & Wiese, 2018).

A common assumption is that happiness is indeed valuable, desired and pursued by most people. Contrary to this assumption, a survey about the less studied aspects in various cultures revealed that some people hold a negative view of happiness (Joshanloo & Weijers, 2013). Not everyone has the pursuit of happiness as a supreme value in life; contrarily, they may endorse fear of happiness beliefs for several different reasons. These beliefs generally imply that people see happiness with caution or even fear because it might bring bad consequences (Joshanloo & Weijers, 2013). Beliefs of fear of or aversion to happiness are present in various cultures in which the cultural background defines the reason underlying such beliefs. For instance, Chinese cultures consider that an excess of happiness may precede misfortune and thus happiness has to be limited (Lu, 2001), while Muslim cultures regard happiness as

being superficial since it keeps them away from God (Good & Good, 1988). Accordingly, it seems important to take into account whether happiness is seen as a source of advantage or as a danger. If happiness is thought to have bad consequences, one might abstain from engaging in happiness-generating experiences and ultimately perceive a lowered sense of subjective well-being.

Taken together, establishing the optimal conditions in which happiness is beneficial is both a complex yet attainable task that may depend, among other factors, on individual circumstances, the outcome itself (Nickerson, Diener, & Schwarz, 2011), cultural factors, and the type of conceptualization of happiness being studied (Biswas-Diener & Wiese, 2018). Evidence of the wider benefits of happiness are manifold, but further expansion of this field requires sophisticated research that allows for a more accurate analysis of whether the happiness-outcome relationship is linear and, if not, for an identification of conditions that are more suitable. This way, practical, academic and political implications would all make the most of them (Biswas-Diener & Wiese, 2018).

3.7. The study of happiness from two poles: outcome vs predictor

"Happiness not only feels good, it is good" (Lyubomirsky & Layous, 2013, p. 57). The logic that happiness or any factor representing well-being can only be studied as an outcome, or that happiness should only be the target of interventions, falls short. An existing body of research is increasingly providing empirical evidence to challenge this assumption (Bieda et al., 2019; Coffey, Warren, & Gottfried, 2015). Happiness can be measured as a consequence of emotional, cognitive and behavioral mechanisms, and as an antecedent or prelude of numerous positive outcomes too, such as success, health, income or physical health (Lyubomirsky, King et al., 2005). Research is interested in identifying the cognitive and emotional processes that cause and maintain happiness. In light of the results, it seems that the relationship between happiness and such cognitive and emotional processes may work the other way around. Studies have revealed that happiness contributes greatly to different adaptive outcomes, such as improved physical health, work performance, social connections, creative thinking and pro-social behavior (e.g., Argyle, 1997; Fredrickson & Levenson, 1998; Huppert, 2009b; Lamers, Westerhof, Glas, & Bohlmeijer, 2015; Lount, 2010; Ryff, 2014; Steptoe, Dockray, & Wardle, 2009; Whelan & Zelenski, 2012), and function as a protective factor against psychopathology, among others (Lamers et al., 2015). Along these lines, the link between success and happiness was

claimed to be unidirectional, with success at work or in life being the cause of happiness; nevertheless, the formula "work hard, succeed, and then be happy" does not make the whole picture.

Evidence built up over the last decade points to the fact that this relationship also works the other way around, and happiness in this sense also exerts a causal effect on better work performance (Boehm & Lyubomirsky, 2008; Walsh, Boehm, & Lyubomirsky, 2018). Likewise, happiness contributes to a more relaxed state, better emotion regulation and better problem coping (Yiengprugsawan, Somboonsook, Seubsman, & Sleigh, 2012). By investigating the possible reciprocal relationships over time, Bieda et al. (2019) found that higher levels of happiness, life satisfaction and mental health could predict their own future levels one year later. More notably, happiness and life satisfaction showed a continued relationship with mental health, but no reciprocal association was reported between happiness and life satisfaction. Although the generalization of such findings is subject to sample limitations (participants were Chinese undergraduates), the study suggested that happiness may serve as an initial marker for positive change in psychological interventions. Altogether, research evidence suggests that happiness does matter.

The majority of research investigating happiness as a predictor is grounded on the broaden-and-build theory of positive emotions (Fredrickson, 2001). This theory was the first theoretical attempt to postulate that positive states of mind could lead to enhanced psychological, social and physical resources, and that positive emotions contributed to long-lasting benefits rather than simply momentary gains. From then onwards, scholars became interested in studying the possible mechanisms by which happiness could build durable personal resources. As a notable realm, the relationship between happiness and health is widely acknowledged – that is, close attention has been paid to how we subjectively feel in relation to how we physically function. Happiness and other positive states of mind are associated with enhanced immunity and cardiovascular functioning (Steptoe et al., 2009), lower morbidity and more tolerance to pain and greater health benefits, such as lower blood fat and fewer inflammatory or neuroendocrine problems (Blanchflower, Oswald, & Stewart-Brown, 2013; Howell, Kern, & Lyubomirsky, 2007; Pressman & Cohen, 2005; Steptoe, Wardle, & Marmot, 2005).

Other meta-analytical studies have demonstrated that ill patients with higher positive affective evaluations were more likely to recover from and survive illness (Lamers, Bolier, Westerhof, Smit, & Bohlmeijer, 2012). An interesting study evidenced that, beyond one's own happiness, having a happy romantic partner improved one's

health (Chopik & O'Brien, 2017). Additionally, happiness seems to predict longer lives, a finding that was reported in a widely referenced study on nuns (Danner, Snowdon, & Friesen, 2001) and replicated on famous deceased psychologists (Pressman & Cohen, 2012). The mutual and beneficial relationship between mental health and physical health also holds true in cross-cultural studies (Blanchflower & Oswald, 2008; Liu et al., 2014; Pressman, Gallagher, & Lopez, 2013). Happy people are more likely to be re-employed after being unemployed (Krause, 2013), work more efficiently (Krause, 2013), earn higher incomes (De Neve & Oswald, 2012) and donate more money and more blood than less happy people (Shin, Choi, Suh, & Jaisun Koo, 2013).

As represented in the tripartite model of mental health, social elements are key to subjective well-being. Research exploring the role of social relationships on health suggests that sociability predicts greater resistance to cold virus and leads to enhanced health (Cohen, Doyle, Turner, Alper, & Skoner, 2003). Longitudinal studies have demonstrated that happiness in the early stages of life predicted adult life satisfaction, workplace hope and optimism (Coffey et al., 2015), and cross-sectional studies have also associated happiness with greater resilience in students (Short, Barnes, Carson, & Platt, 2018). The effect of emotional well-being on physical health can be explained by an indirect pathway between happiness and healthy behaviors, too. For example, happy people are more likely to wear seatbelts and be less implicated in car accidents (Goudie, Mukherjee, de Neve, Oswald, & Wu, 2014), have more medical treatment adherence (Cuffee et al., 2012), and do exercise and avoid smoking (Boehm, Vie, & Kubzansky, 2012). There is enough evidence to embrace the postulation of happiness as more than only an outcome, opening fruitful avenues for future research wherein happiness should be targeted as a causality factor.

To conclude, this section has presented empirical evidence to view happiness as more than an outcome, supporting the predictor-outcome dichotomy of happiness. In an attempt to build upon a comprehensive and accurate approach to the consequences of happiness, future research would need to subsume momentary pleasant experiences as well as optimal social and psychological functioning as possible predictors of favorable (and unfavorable) outcomes (Joshanloo et al., 2018).

3.8. Correlates of happiness

So far, the above sections have presented reasons in favor of happiness as a construct that can bring potential benefits to people. The following section covers [some of] the correlates of happiness. Scholars are interested in identifying the

cognitive and affective processes that help to explain individual levels of happiness (Lyubomirsky, 2001). Hence, many correlates have been examined in efforts to understand their contribution to happiness (Diener, Oishi, & Lucas, 2003). This doctoral thesis thoroughly examines four correlates of happiness, which are developed in more detail below and correspond to the four papers presented in the compilation. The rationale behind the selection of these correlates responds to the need to fill in some gaps in the literature. For instance, the first article responds to previous inconsistencies regarding the role certain EI facets play in happiness. The second article concerns the scientifically unexplored question of how happiness can build an optimistic outlook. The third article deals with the role of new forms of humor in an attempt to widen the scope of research into happiness. Lastly, the fourth article aims to investigate the recently introduced measure of fear of happiness.

3.8.1. Happiness and emotional intelligence

Emotional Intelligence (EI) is recognized as an influential construct in personality and social psychology (Extremera, Ruiz-Aranda, Pineda-Galán, & Salguero, 2011). It has produced increasing research in the field of well-being, especially because of its predictive influence on several cognitive, affective and behavioural outcomes (Mayer & Salovey, 1997). Decades of study have demonstrated the relationship between EI and SWB. Overall, EI is defined as a set of abilities, that can be trained (Hodzic, Scharfen, Ripoll, Holling, & Zenasni, 2018), whereby people obtain information from their emotions and use it to guide their thinking and actions for optimal adaptation (Salovey & Mayer, 1990).

The study of EI and happiness may provide insight about the mechanisms by which people use emotional information to engage in a more satisfied and happier life (Diener, Oishi, & Lucas, 2003). EI accounts for an indicator of individual differences that influences life satisfaction and happiness (Mayer & Stevens, 1994) and differences in the acknowledgement and discrimination of emotions yielded differences in well-being (Lischetzke, Eid, & Diener, 2012), suggesting that the way people handle EI plays a crucial role in the promotion of happiness. The literature generally supports the positive relationship between EI and various well-being measures (Koydemir, Şimşek, Schütz, & Tipandjan, 2013; Szczygieł & Mikolajczak, 2017). A recent meta-analysis revealed a strong association of EI with SWB, showing a larger relationship with the cognitive component (i.e., life satisfaction) than with the

affective component (i.e., happiness) (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2015). The results overall suggest that people with high EI, especially emotional clarity and mood repair, are more likely to experience higher levels of life satisfaction and happiness than are people who are less emotionally intelligent (Extremera, Salguero, & Fernández-Berrocal, 2011). The results regarding mood attention are more difficult to interpret, since the literature contains conflicting findings on this (Augusto-Landa, Pulido-Martos, & López-Zafra, 2011). A limiting factor of all this research lies in the approach used to measure the structure of EI; although largely claimed to be multidimensional, EI has been measured as a unidimensional construct. This fact may have caused the inconsistencies found in the literature regarding the relation of EI facets to SWB. A possible solution for elucidating these discrepancies might be to analyze the structure of EI using the bifactor model, which allows one to differentiate between a general EI factor and three different EI facets.

Despite many studies have shown that EI is not a one-dimensional construct (e.g., Chen, Peng, & Fang, 2016; Delhom, Gutierrez, Lucas-Molina, & Meléndez, 2017; Mayer et al., 2016), it is still interpreted and studied as though it were (Gutiérrez-Cobo, Cabello, & Fernández-Berrocal, 2017; Koydemir et al., 2013; Szczygieł & Mikolajczak, 2017). Regardless of scientific efforts to measure and integrate EI as a category of intelligence, it is not yet considered an independent form of intelligence per se (Mestre, MacCann, Guil, & Roberts, 2016). Nonetheless, intelligence and EI could be compared in their structural organization: like general intelligence, EI might be expected to have an *e*(motional)-factor (as compared with intelligence *g*(eneral)-factor; Carroll, 1996; Spearman, 1923) describing the general ability to comprehend and use one’s own and others’ emotions; and one could also distinguish more specific and independent abilities of mood attention, emotional clarity and mood repair (as compared with intelligence's comprehension knowledge, fluid reasoning, short-term memory and processing speed; Wechsler, 1997). Such a theoretical structure might be empirically verified by means of the bifactor model. Previous studies have provided evidence of the suitability of and preference for the bifactor model to represent the structure of intelligence (Beaujean, 2015; Frisby & Beaujean, 2015). The bifactor approach has also proven its utility in research on SWB and its indicators (Jovanović, 2015; Lauriola & Iani, 2017; Rogoza, Truong, Różycka-Tran, Piotrowski, & Żemojtel-Piotrowska, 2018), affect (Chen, Bai, Lee, & Jing, 2016), intelligence (Luo, Petrill, & Thompson, 1994) and even in the assessment of meaning in life (Damasio, Hauck-Filho, & Koller, 2016). By applying the bifactor model in EI we

predict that all items will contain some elements of the *e*-factor (the bifactor: general EI construct) and, simultaneously, information about more specific and independent emotional abilities (EI facets: mood attention, emotional clarity and mood repair). Put differently, through the bifactor model each of the assessed facets explains something unique and different but, at the same time, they share a common element between them, and that is general EI.

The bifactor EI model may suppose a plausible method to elucidate previous discrepancies regarding the effect of the EI facets. The general *e*-factor may contain shared information that explains the general self-perceived ability to reason about emotions, and the three independent specific emotional facets may provide additional information beyond the *e*-factor (mood attention, emotional clarity and mood repair). By this means, each of the three emotional facets would be accurately separated, therefore allowing the examination of their unique contribution to different measures of well-being beyond the *e*-factor.

3.8.2. Happiness and humor

Central to the entire discipline of subjective well-being is the concept of humor, an area of interest that is currently contributing to the study of happiness. Based on the effectiveness of positive interventions to enhance happiness in the clinical practice (e.g., Bolier, Haverman, Westerhof, Riper, Smit & Bohlmeijer, 2013; Johnson & Wood, 2017) and the importance of promoting positive aspects for increasing well-being (e.g., Koydemir, Şimşek, Kuzgun & Schütz, 2018; Layous & Lyubomirsky, 2014; Sanchez, Haynes, Parada & Demir, 2018), one might suggest that it is equally important to promote flourishing aspects (i.e., happiness) as well as to mitigate illness-related aspects (i.e., fear to approach social relationships). But, what if increased levels of subjective well-being were, also, due to the effect of other negative aspects, such as finding pleasure in snubbing someone?

Humor has generally been defined as a human experience involving the perception that something is funny (Ruch, 2008). It describes a social phenomenon that takes many forms in different social contexts, such as canned jokes, wits, or funny verbalizations (Martin, 2007). Within this realm, there is no consensus about a singular definition of this multidimensional construct (Ruch, 2012); rather, it has been generally referred to as an umbrella term for all funny and laughable things (Martin, 2007). Although the origins of humor literature date back to classical philosophers such as Plato and Aristotle, scholars have recently accumulated a considerable

amount of evidence on the nature and correlates of humor from different psychological perspectives (e.g., Martin, 2001; Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003; Ruch, Wagner, & Heintz, 2018).

Scholars have recently introduced a categorization to distinguish between *light* (e.g., virtuous and adaptive humor used to accept benevolently the world's imperfections) and *darker* (e.g., non-virtuous and mockery-related forms of humor used to deride others) forms of humor (Hofmann, Heintz, Pang, & Ruch, 2019; Ruch, et al., 2018). The former understands humor as a morally valued trait that guide virtuous behaviors (Beermann & Ruch, 2009a, 2009b) and is articulated by benevolent and corrective humor (Ruch & Heintz, 2016); while the latter describes different reactions to laughter and ridicule in social interactions, such as the fear of being laughed at (gelotophobia), the joy of being laughed at (gelotophilia), and the joy of laughing at others (katagelasticism) (Ruch & Proyer, 2009). In the remainder of this point, we will go through each of these two new conceptions of humor: virtuous humor and dispositions towards ridicule and laughter.

Albeit the historical and philosophical literature treated humor as a virtue, it is only recently that scholars have scientifically investigated the morality of humor in relation to virtues. For instance, in positive psychology research humor is understood as a character strength within the virtue of transcendence (Peterson & Seligman, 2004) and is one of the strengths most related to well-being (Peterson, Ruch, Beermann, Park, & Seligman, 2007). Within this scope virtuous humor has been associated with the virtues of humanity, transcendence, and wisdom (Beermann & Ruch, 2009a, 2009b; Müller & Ruch, 2011). A recent approach has conceptualized two forms of virtue-related humor emphasizing the ethical dimension – benevolent and corrective humor (Ruch & Heintz, 2016). These are proposed as novel and more sophisticated humor forms that fill the gap between humor as a trait and humor as a virtue. In their initial study, Ruch and Heintz (2016) found that benevolent and corrective humor captured virtuous elements of humor beyond the sense of humor, mockery, and character strengths in a different way. Although benevolent and corrective humor are both morally based and aim at doing good to others, there are differences between the two – benevolent humor involves a humorous outlook used to understand and accept human weaknesses and world incongruities with a tolerant attitude, whereas corrective humor uses mockery or ridicule to elicit human improvement and establish justice (Beermann & Ruch, 2009a; Ruch & Heintz, 2016). Despite the use of wit, corrective humor does not pretend to put someone down but rather to improve mishaps or mistakes by making fun of them (see Ruch &

Heintz, 2016), yet the act of correcting others might imply the insatisfaction with the current situation and subsequently build upon lower levels of happiness. The main distinction lies in the motivation of corrective humor to correct wrongdoings by means of mockery, in contrast to the mere acceptance displayed by benevolent humor (Heintz, et al., 2018). Having conceptualized virtuous humor, we will now move on to discuss the dispositions towards ridicule and laughter.

Laughter can elicit different responses among people and is not always experienced as something positive: it can be seen as aversive and malicious, as self-enhancing, or be used to ridicule others. These interpretations connect with three dispositions towards ridicule and laughter: the fear of being laughed at (gelotophobia), the joy of being laughed at (gelotophilia), and the joy of laughing at others (katagelasticism) (Ruch & Proyer, 2009). Variations among these tendencies are seen as markers of individual differences in the way people cope with social daily events (Ruch, Hofmann, Platt, & Proyer, 2014).

Gelotophobia was introduced as a phenomenon related to social phobia, but Ruch and Proyer (2009) showed that it could also be experienced by non-clinical populations. One of the distinctive characterizations of gelotophobes is a persistent bias in the perception of and response to laughter, because any situation involving laughter is pictured as being maliciously directed towards them (Proyer, Ruch, & Chen, 2012; Ruch et al., 2014). Gelotophilia and katagelasticism both involve the joy of laughing but the object of laughter is different – while gelotophiles enjoy laughing at themselves, katagelasticists enjoy laughing at others (Ruch & Proyer, 2009). Gelotophiles are described as cool, happy, warm, and extroverted people who usually seek potential situations in which they can make fun at their own expense and do not abstain from sharing embarrassing or shameful experiences (Ruch & Proyer, 2009). Although gelotophilia may share some commonalities with the capacity to laugh at oneself, which is referred to as a core element of humor (McGhee, 1996) and entails an adaptive resource to cope with negative emotions (Hofmann, 2018), a major distinction set these humor terms apart; that is, while gelotophilia requires an audience to display humor, laughing at oneself does necessarily not.

One should note two aspects: first, despite being interpreted as mockery with a benevolent tendency, virtue is not a central element in gelotophilia (Ruch & Proyer, 2009); and second, regardless of the use of self-disparaging humor, gelotophiles do not necessarily put themselves down but they rather enjoy laughing with others at their own expense. Katagelasticists in turn enjoy laughing at their audience and

usually do not care about their reactions or emotions, therefore they seek potential situations to make fun at others' expense and ridicule them if any misfortune happens. They tend to screen signs of amusement in their audience to evoke humor and are characterized as unfriendly, indifferent, self-centred, and annoying (Ruch & Proyer, 2009). While self-enhancement in gelotophiles stems from poking fun at their faults, in katagelasticists the motivation lies in injuring others (Martin et al., 2003; Ruch & Proyer, 2009). Similarly, the virtuous element of correcting and bettering people embedded into corrective humor is lacking in katagelasticism, where the motivation is rooted in the pleasure derived from putting others down (Ruch & Heintz, 2016).

Although research has examined the mechanisms of happiness and the development of humor strategies to increase it (Wellenzohn, Proyer, & Ruch, 2016, 2018), little is known about how engaging in virtuous humor forms and having different dispositions towards laughter and ridicule can influence happiness. Humor became an essential element of mental health and incorporated connotations of being well-adjusted and able to deal with stress (Martin, 2007). It has been associated with several positive outcomes, such as increased mental well-being, optimism (Schneider, Voracek, & Tran, 2018; Wellenzohn, Proyer, & Ruch, 2018), and a lower prevalence of cardiovascular disease (Hayashi, Kawachi, Ohira, Kondo, Shirai, & Kondo, 2016). Prior research examined the relationship of humor with mental health (Schneider et al., 2018) and the effectiveness of humor-based interventions on well-being (Wellenzohn et al., 2018). More specifically concerning the role that virtuous humor and the dispositions towards ridicule and laughter exert on happiness, previous studies reported that gelotophobia related negatively to well-being indicators (e.g., life satisfaction, subjective well-being, and happiness) (Proyer et al., 2012; Samson, Proyer, Ceschi, Pedrini, & Ruch, 2011). Hofmann, Ruch, Proyer, Platt, and Gander (2017) replicated these results and, moreover, found that katagelasticism was negatively and gelotophilia was positively related to life satisfaction.

Because virtuous humor is morally based and pursues the good in others, one might find instances in the literature regarding a positive relationship with happiness. To begin with, virtues are considered psychological routes that contribute to a happy life (Peterson & Seligman, 2004). Engaging in virtuous behaviours generally relates to improved well-being (Steger, Kashdan, & Oishi, 2008), and from the character strength perspective virtuous humor-related behaviours made people happier (Proyer, Ruch, & Buschor, 2013). The use of self-enhancing forms of humor (e.g., adaptive humorous outlook used during times of adversity to enhance the self

without deriding others; Martin et al., 2003) can be considered virtuous (Beermann & Ruch, 2009b). This type of humor was positively linked with mental health and well-being, however, the use of non-virtuous forms of humor such as sarcasm, derision, and self-defeating humor (e.g., self-disparaging in order to ingratiate others; Martin et al., 2003) was negatively related (Martin et al., 2003; Jovanovic, 2011; Schneider et al., 2018). In this line of theorizing, a recent study reported positive relationships of subjective well-being with light styles of humor (e.g., humor understood as benevolent) and negative relationships with mockery styles (e.g., sarcasm, cynicism; Ruch, et al., 2018). Regardless of the previous findings, it is necessary to examine more specifically how virtuous humor (i.e., benevolent and corrective humor) contributes to happiness.

3.8.3. Happiness and optimism

The relationship of happiness with optimism is also widely acknowledged in the literature. Considered a cognitive aspect, optimism refers to an individual's generalized expectation of the occurrence of positive future events (Carver, Scheier & Segerstrom, 2010). It is measured as a trait in personality psychology and the investigation of the related outcomes has yielded manifold results. It has been positively associated with forgiveness, adaptive approach coping, emotional well-being, and physical and mental health (Bouchard, Carver, Mens, & Scheier, 2017; Conversano et al., 2010; Rey & Extremera, 2014). Optimism was also found to be a predictor of resilience and emotional well-being among cancer survivors (Gallagher, Long, Richardson, & Souza, 2019). Moreover, it was negatively related to anxiety (Boman & Yates, 2001), depression (Shapira & Mongrain, 2010) and undesirable aspects of personality such as the Dark Triad (Jonason, Foster, Csathó & Gouveia, 2018). Longitudinal and neuroimaging studies reported the protective effects of optimism against stress (Brissette, Scheier, & Carver, 2002; Thomas, Britt, Odle-Dusseau, & Bliese, 2011) and anxiety (Dolcos, Hu, Iordan, Moore & Dolcos, 2016; Eagleson, Hayes, Mathews, Perman & Hirsch, 2016). Besides, research on applied psychology demonstrated the effectiveness of interventions that included activities aimed at cultivating optimism and positive thoughts (Bolier et al., 2013; Malouff & Schutte, 2017; Sin & Lyubomirsky, 2009). Although much of the literature about optimism as a trait focuses on its related outcomes, we can find proposals that embed optimism into the conceptualization of well-being. For example, Peterson (2000) recommended that well-being should include instances of optimism and EI,

and in their study about the nature of PWB, Wissing and Temane (2008) found that optimism and EI tapped into one of the two specific factors that defined the general construct of PWB.

One aspect that needs further consideration is the distinction of optimism and pessimism as not just two poles of the same continuum. As mental health is more than the absence of mental illness, optimism is more than the mere absence of negative expectancies. Thus, optimism and pessimism conform somewhat independent entities (Carver et al., 2010). Pessimism has gathered less outcome-related evidences, with research suggesting associations with lower PWB, health-damaging behaviors and social withdrawal (Carver, Lehman, & Antoni, 2003; Carver & Scheier, 1998). Pessimism was linked to higher risk of suffering depression and obsessive-compulsive symptoms (van der Velden et al., 2007), worse physical functioning and more physical pain (Costello et al., 2002; Fournier, de Ridder, & Bensing, 2002). Unlike optimism, pessimism yields people to expect darker scenarios, be doubtful and insecure about their chances to reach a goal, persevere less and thus be less likely to success (Carver et al., 2010; Nes & Segerstrom, 2006). While optimism is characterized by the flexible use of adaptive coping strategies (e.g., dealing with adverse situations) depending on the stressor, pessimism is characterized by the use of disengagement strategies (e.g., escaping from the stressor) that hinder goal accomplishment (Nes & Segerstrom, 2006), which was conceptualized to be a maladaptive strategy (Coyne & Racioppo, 2000; Prati & Pietrantoni, 2009).

The differences in the correlates between optimists and pessimists may underlie in the coping strategies and response behaviors displayed in adverse situations. According to Atkinson's (1957) expectancy-value model, people who are more confident in attaining the valued goal will persevere more and be more likely to success. This way, optimists and pessimists differ in a set of psychological mechanisms: behaviorally, optimists are more likely to persevere towards goal accomplishment through problem-solving strategies and enjoy a higher probability of success, whereas pessimists use disengagement strategies that prevent them from goal accomplishment and thus give up more prematurely. Cognitively, optimists picture a brighter future that is likely to be reached through plan-guided behavior, while pessimists expect a bad scenario hard to attain. And emotionally, optimists feel confident when facing adversity and use their affective resources when dealing with uncertainty and goal unattainability, whereas pessimists are likely to be

doubtful and insecure about their chances to reach a goal (Carver et al., 2010; Nes & Segerstrom, 2006).

Despite research on optimism has justified the importance of studying and promoting this trait, there is less evidence regarding what characterizes optimists and sets them apart from pessimists. Some gaps have also been reported in the research of optimism. For instance, the existing lack of study of truly pessimists (Carver et al., 2010), and the need to consider more in-depth aspects of optimism and pessimism in order to provide more comprehensible evidences in this field of study (Riskind, Sarampote, & Mercier, 1996). A limiting aspect of the above-mentioned studies is that results were often obtained following a variable-centered approach – that is, the focus of study was on describing associations between variables (i.e., predictors explaining variance in outcomes; Eye & Bogat, 2006; Muthén & Muthén, 2000). Despite results obtained from this approach allow referring to optimism as a general construct rather than as a personal characteristic, research language and lay people interchangeably refer to optimists and pessimists when describing others in real life settings. This might reflect inaccuracy in interpretation of the results, since studies from the variable-centered approach seem unsuited to infer such attributions. As a result, little is known about the personal differences between optimists and pessimists.

One possible solution to these concerns will be to implement the person-centered approach, in which the focus is on describing differences between groups, where the analyzed variables are treated as characteristics of those individuals rather than outcomes (Laursen & Hoff, 2006). Provided that samples in the studies tend to be non-homogeneous and the variables are barely connected to each other in the same way for all people, the potential of the person-centered approach lies in dividing the sample into subgroups that share a similar optimism-pessimism configuration (Eye & Bogat, 2006; Muthén & Muthén, 2000). This would allow to accurately refer to optimists and pessimists.

Since optimists use adaptive coping strategies and anticipate adversity with positive outlook, one might think that underlying individual differences in their emotional abilities, affective states and life judgments could be a source of advantage that help them be optimistic. Building upon the broaden-and-build theory (Fredrickson, 2001), which proposed that positive emotions were not only outcomes but also predictors of well-being, individual differences in EI, happiness and life satisfaction might be examined as predictors of positive functioning-related aspects, such as optimism. These factors are seen as traits that account for individual

differences (Sheldon & Lucas, 2014) and, although they have repeatedly been studied as optimism outcomes (see Kleiman et al., 2017), differences in these aspects could be treated as properties that, to a different extent, may differentiate whether people see the glass half full or half empty.

3.8.4. Happiness, depression and fear of happiness beliefs

The widespread belief that everyone wants and seeks happiness might disregard the fact that, for some people and within certain cultures (such as Asian), the search for happiness is seen as undesirable or as something that tempts fate (Joshanloo & Weijers, 2013). Recently introduced into research, the belief that happiness is followed by mishaps is known as "fear of happiness", and it is considered a stable domain with detrimental consequences for well-being (Joshanloo, 2013). Although different reasons underlie people's aversion to experiencing happiness (Joshanloo & Weijers, 2013), as noted earlier (see section *3.6*), studying the beliefs that make people see happiness as aversive and make them retreat from positive feelings could help us understand the experience of happiness and its role in mental health more comprehensively.

Studies have shown that fear of happiness is related to diminished life satisfaction, and subjective and psychological well-being (Joshanloo, 2013, 2018a; Joshanloo et al., 2014) even beyond personality (Yildirim & Belen, 2018). One possible explanation is that viewing pleasant states of mind as a source of future hardship engenders emotional strategies that down-regulate the effect of positive emotions (Joshanloo et al., 2014). At the cultural level, fear of happiness has been associated with reliance on hierarchical sources, societal cynicism (a belief that life is about suffering and that people should not be trusted; Bond et al., 2004), dynamic externality (thinking that life is fated and complex; Van de Vijver, Van Hemert, & Poortinga, 2008) and religious affiliation (Joshanloo et al., 2014). Cultures that understand happiness as fortune and good luck tend to be more fearful of being happy because they may think that it will easily turn to bad luck, whereas cultures that frame happiness as something achievable tend to fear it less and put more effort into it (Joshanloo et al., 2014). Hence, differences in the significance and expression of emotions seem to depend on variations in the cultural context. The reasons why happiness may not be equally highly valued across the globe are different, but research generally suggests that Western cultures are more inclined to dampen

positive emotions because they see happiness as less appropriate in social contexts (for a review see Joshanloo & Weijers, 2013).

Mental health is increasingly recognized as a serious, worldwide public health concern (EU, 2009; OECD, 2013; Stiglitz et al., 2010). As described in previous sections (see *3.3.5.*), the dual continua model of mental health asserts that the mere absence of mental illness does not equate to mental health (Keyes, 2005). Rather, a comprehensive evaluation of mental health entails instances of positive factors (e.g., happiness) and absence of clinical risk factors (e.g., depression) (WHO, 2001). One major issue in mental health research concerns the prevalence of depressive disorders across the globe. It is estimated that over 4.4% of the world's population (approximately 300 million individuals) suffers from depression (WHO, 2017). A growing body of research is providing further evidence of the effectiveness of happiness-boosting interventions in clinical practice (e.g., Bolier et al., 2013; Johnson & Wood, 2017). In addition, although the combination of pharmacotherapy and cognitive behavioral therapy has shown encouraging results in improving mental health in people with depression, the practice of happiness-increasing activities is expected to help roughly 70% of reported cases that have not received the appropriate level of treatment (National Institutes of Health & National Institute of Mental Health, 2008).

Depression is conceptualized as a major indicator of mental illness (Keyes, 2002, 2005). As the number of people affected by depression has grown in recent years (WHO, 2017), this illness has become a societal burden. Defined as a [sometimes] chronic and impairing psychological disorder, depression is characterized by anhedonia and symptoms of psychological and social malfunctioning, such as loss of interest or feelings of worthlessness (APA, 2013). Previous studies have found that depression is associated with negative outcomes, such as a negative impact on people's quality of life (IsHak et al., 2015), physical and social well-being (Wells et al., 1989), and premature death (Wulsin, Vaillant, & Wells, 1999). Along with the growth in depression epidemiology, however, there is increasing interest in the role that happiness plays in mental health. It seems that happiness is a great contributor of mental health (Layous & Lyubomirsky, 2014) with a reciprocal relationship that persists in the long run (Bieda et al., 2019).

Together, the above-mentioned studies have provided important insights into how happiness and [lack of] depression play an important role in the maintenance of mental health. Some scholars have asserted the importance of exploring the mechanisms underlying depression (Ford et al., 2014) and happiness (Layous &

Lyubomirsky, 2014). It would be plausible to think that being fearful of positive affective experiences, such as happiness, might be a mechanism related to depression. This assumption is based on the notion that suppressing positive emotions relates to depressive symptoms, anxiety and stress (Beblo et al., 2012; Gilbert et al., 2012; Gilbert, McEwan, Catarino, Baião, & Palmeira, 2014). In a prospective study, Raes, Smets, Nelis, and Schoofs (2012) found that dampening positive emotions predicted a higher prevalence of depressive symptoms some months later – notably, they suggested that the way people responded to positive emotions was more important than how they reacted to negative emotions. More specifically, fear of happiness was found to be a great predictor of depression (Gilbert et al., 2014).

Overall, these results seem to open new lines of inquiry into the search for mental well-being. Studying the avoidance of negative or unpleasant emotions is somehow common in the field of psychology, while studying fear of positive emotions or mind states (e.g., happiness) seems somehow unusual. Since fearing happiness is a conception that prevents people from greater mental health, recent studies have included fear of happiness and fragility of happiness beliefs measures as targets in happiness-boosting interventions. It seems that tackling negative views of happiness, such as seeing happiness as the cause of future bad luck or as a fleeting phenomenon, is now possible (Lambert et al., 2018). With the expansion of the study of happiness, new measures are being introduced to assess more specific domains. Fear of happiness beliefs may become a key mechanism in understanding why people engage in happiness-avoiding thoughts or behaviors that, ultimately, might hinder a complete experience of happiness.

4 RATIONALE AND OBJECTIVES

4.1. Thesis rationale

In the past two decades a number of researchers have sought to determine what characterizes a *well-lived* life or, simply put, how we can lead a happy and fulfilling life. Recent developments in the field of subjective well-being have led to a renewed interest in studying the factors that lead to and follow on from the subjective experience of happiness. For example, a primary concern of government agencies, non-governmental organizations and public institutions is to set mental health and well-being enhancement as a priority goal in the coming years. This is represented within the Sustainable and Development Goals report of the United Nations (2019), the Organization for Economic Co-operation and Development (2013), the European Commission (2009) and the Stiglitz Commission on the Measurement of Social and Economic Progress (Stiglitz et al., 2010). Investigating the possible effects and causes of happiness and other well-being aspects is a continuing matter of interest at individual and societal levels. Countries are relying on subjective indicators when it comes to measuring societal progress and national advancement. This scenario provides an important opportunity to combine efforts from different realms interested in advancing our understanding of the potential contributors or hindrances to a *well-lived* life.

Drawing upon the presented strands of research into mental health and well-being, this thesis attempts to add to the body of knowledge on the investigation of happiness. The principal purpose is to contribute to this line of inquiry by investigating four main questions relating to happiness. Consequently, the four main objectives are:

1) To disentangle prior inconsistencies in the relationship between EI and happiness
2) To examine to what extent happiness defines optimistic and pessimistic people
3) To investigate the role that novel and emerging forms of humor play in the context of happiness
4) To explore the predictive effect of happiness and depression on fear of happiness beliefs

Overall, the compilation of studies intends to shed some light on several aspects that: have produced inconclusive results (objective 1); have barely been explored in the research of happiness (objectives 2 and 3), or; have recently been introduced and remain relatively unexplored in the science of happiness (objective 4). To that end,

this thesis presents four articles, each one addressing the above objectives. In the following pages, a more concise presentation is given of the specific research questions and the hypotheses tested in the compilation of articles that compose this thesis.

4.2. Article 1: Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model

- General objective: To investigate the relationships between EI and SWB indicators, namely happiness and life satisfaction.

In view of the little agreement on the role that the EI facet of mood attention plays in SWB indicators, we first attempted to analyze the structure of EI. To that end, we introduced a new measurement approach (bifactor model) and then analyzed its association with happiness and life satisfaction. it should be noted that this article employed a two-study structure.

- Specific objectives:

Objective 1.1: To test the bifactor structure of EI (study 1)

Objective 1.2: To investigate the relationship between EI (bifactor model) and SWB indicators (study 1)

Objective 1.3: To explore differences in the relationship between EI and SWB indicators in two independent samples: undergraduate university students and employees of a social organization (study 2)

- Research questions:

Question 1.1: Does the bifactor model best represent the structure of EI and thus help to clarify the role of mood attention on related outcomes? (study 1)

Question 1.2: How does the construct of EI and its facets relate to happiness and life satisfaction? (study 1)

Question 1.3: Is there any difference in the relationship between EI and SWB indicators when comparing undergraduates and employees? (study 2)

- Tested hypotheses:

Hypothesis 1.1: The EI bifactor structure with an *e*-factor and specific emotional facets best represents the structure of EI (study 1)

Hypothesis 1.2: The *e*-factor, as well as the specific facets of emotional clarity and mood repair, are more linked to increased life satisfaction and happiness than mood attention (study 1)

Exploratory hypothesis: Owing to the lack of literature on the last specific question, our study served as a preliminary exploration to fill this gap and no hypotheses were stated (study 2)

4.3. Article 2: Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness

- General objective: To examine the relationship between virtuous humor and the dispositions towards ridicule and laughter and happiness.

This article analyzed the emerging role that two novel forms of humor play in the context of happiness. Although these associations have previously been investigated separately, there is no available empirical evidence of the possible interactions between these two novel forms of humor and happiness.

- Research questions:

Question 2.1: How can virtuous humor (i.e., benevolent and corrective humor) contribute to happiness?

Question 2.2: How can the dispositions towards ridicule and laughter (i.e., gelotophobia, gelotophilia and katagelasticism) contribute to happiness?

- Tested hypotheses:

Hypothesis 2.1: Benevolent humor is positively associated with happiness, while corrective humor is negatively associated with happiness

Hypothesis 2.2: Gelotophobia and katagelasticism are positively related to happiness, while gelotophilia are negatively related to happiness

4.4. Article 3: What makes the glass half full? Emotional intelligence, happiness and life satisfaction as differentiating characteristics between optimists and pessimists

- General objective: To examine the trait-like configurations of optimists and pessimists based on differences in happiness, EI and life satisfaction.

To date, there has been little research devoted to studying this question. We therefore attempted to fill this gap by establishing the cognitive and affective characteristics that describe optimists and make them different from pessimists.

- Research questions:

Question 3.1: How does EI characterize optimists and pessimists?

Question 3.2: How does happiness characterize optimists and pessimists?

Question 3.3: How does life satisfaction characterize optimists and pessimists?

- Tested hypotheses:

Hypothesis 3.1: Optimists are characterized by more EI than pessimists

Hypothesis 3.2: Optimists are characterized by more happiness than pessimists

Hypothesis 3.3: Optimists are characterized by more life satisfaction than pessimists

Hypothesis 3.4: Life dissatisfaction is more closely associated with pessimists than optimists

4.5. Article 4: Fear of happiness through the prism of the dual continua model of mental health

- General objective: To investigate the relationship between fear of happiness and depression and happiness from the lens of the dual continua model of mental health.

Research on happiness has recently claimed to investigate the conceptions surrounding depression and happiness and their effects on mental health. From the dual continua model of mental health, happiness is considered an indicator of mental health, and depression is considered an indicator of mental illness. Given the recent inclusion of fear of happiness into research, examining the influence of happiness-avoidance beliefs on depression and happiness may advance our knowledge of mental health.

- Research questions:

Question 4.1: How does depression influence fear of happiness beliefs?

Question 4.2: How does happiness influence fear of happiness beliefs?

- Tested hypotheses:

Hypothesis 4.1: Depression positively predicts fear of happiness beliefs

Hypothesis 4.2: Happiness negatively predicts fear of happiness beliefs

5 METHODOLOGY

5.1. Samples and participants

The data in the four studies related mainly to undergraduate students (Articles 1, 2, 3 and 4), although a sample of employees from a social organization was also included (Article 1). The participants were Spanish in all the studies.

In the data collection process, the eligibility criteria applied to undergraduates required them to be 18 years old or over. Undergraduates were all first-year students enrolled on degrees in Psychology, Social Work or Education in the Faculty of Education, Psychology and Social Work at the University of Lleida (UdL).

No exclusion criteria were applied in the organizational employee sample. Employee participants were professionals from a social organization in the city of Lleida. For the sake of confidentiality, the name of the organization is not disclosed. A summary of the sample descriptives for the four articles can be found in Table 1.

Table 1.

Summary of descriptive statistics for each of the for articles

	N	M_{age}	SD	Female percentage
Article 1	Study 1: 749 undergraduates	24.22	10.74	77%
	Study 2: 200 undergraduates and 200 employees	21.04 (undergraduates) and 41.24 (employees)	6.26 (undergraduates) and 10.29 (employees)	69% (undergraduates) and 79% (employees)
Article 2	229 undergraduates	18.89	2.60	82%
Article 3	1.164 undergraduates and adults (no working status specified)	19.35	6.79	63.7%
Article 4	254 undergraduates	18.9	2.59	82%

5.2. Procedure for data collection

The procedure for gathering the data in each of the four studies was the same. The participants (undergraduates and employees) were engaged in a volunteer program on personal development offered by the UdL. The volunteer program was

conducted within the framework of healthy organizations, aimed at bettering the subjective well-being of people in their individual and social contexts.

In the case of the undergraduates, the data were collected in the first period (late July) and second period (early September) of registration in the Faculty of Education, Psychology and Social Work at the UdL in the 2017/2018 and 2018/2019 academic years. The primary aim of the program was to identify and enhance students' positive traits (EI, optimism, happiness and humor, among others) in order to improve their well-being. All the participants obtained an individualized report with their results after completing the measures, with the opportunity, if they requested it, to have a personal coaching session with one expert member of the research group to comment on the results and clarify any doubts.

In the case of the employees, the data were collected in the months of October and November in 2017. The objective of the program was to identify and promote workers' positive traits in order to improve the well-being of their organization. The data were gathered as the assessment part of this program. At the end of the assessment they obtained an individualized report with their results, which were explained to each of the employees in individual coaching sessions. The training part of the program is beyond the scope of this thesis and is therefore not presented here.

The participants completed the measures via an online platform. In each survey, all respondents were given extensive information about the procedure and signed an informed consent document prior to enrolment in the program. An explanation of the study's aims and the terms of confidentiality and anonymity was given; only those who completed the whole protocol were accepted into the study. In all cases, the respondents participated voluntarily and could withdraw from the study at any time without further explanation. No partial responses were collected. The four studies were conducted in the form of a survey, with the data being gathered via independent Google Forms. By this means, the results were automatically stored for data analysis.

Article 1 comprised measures of EI, life satisfaction and happiness. Article 2 used measures of humor and happiness. Article 3 included measures of happiness, life satisfaction and optimism. Finally, article 4 comprised measures of fear of happiness, depression and happiness (see Table 2 for a review of the scales used). No missing data were registered because respondents were required to answer all the items. The mean time spent completing the survey was around 40 minutes.

It should be noted that the surveys in each of the four studies included more measures as part of the larger assessment of the program on personal development. However, only the measures of interest used in each of the articles are presented here.

Table 2.
Summary of the methodology and the scales used in each of the four articles

	Methodology	Instruments	Construct measures
Article 1	Quantitative, self-reports	- *Trait Meta-Mood Scale-24* (TMMS-24; Salovey et al., 1995; Spanish version by Fernández-Berrocal et al., 2004) - *Satisfaction with Life Scale* (SWLS; Diener et al., 1985; Spanish adaptation by Atienza et al., 2000) - *Subjective Happiness Scale* (SHS; Lyubomirsky & Lepper, 1999; Spanish adaptation by Extremera & Fernández-Berrocal, 2014)	- Emotional Intelligence - Life satisfaction - Happiness
Article 2	Quantitative, self-reports	- *Phophikat-45* (Ruch & Proyer, 2009; Spanish validation by Torres-Marín, Proyer, López-Benítez, & Carretero-Dios, 2019) - *BenCor* (Ruch, 2012; Spanish validation by Heintz et al., 2018) - *Subjective Happiness Scale* (SHS; Lyubomirsky & Lepper, 1999; Spanish version by Extremera & Fernández-Berrocal, 2014)	- Dispositions towards ridicule and laughter: gelotophobia, gelotophilia and katagelasticism - Virtuous humor: benevolent and corrective humor - Happiness
Article 3	Quantitative, self-reports	- *Life Orientation Test-Revised* (LOT-R; Scheier, Carver & Bridges, 1994; Spanish version by Ferrando, Chico, & Tous, 2002) - *Satisfaction with Life Scale*	- Optimism - Life satisfaction - Happiness

		(SWLS; Diener, Emmons, Sem & Griffin, 1985; Spanish version by Vázquez, Duque, & Hervás, 2013) - *Subjective Happiness Scale* (SHS; Lyubomirsky & Lepper, 1999; Spanish version by Extremera & Fernández-Berrocal, 2014)	
Article 4	Quantitative, self-reports	- *Fear of Happiness Scale* (FHS; Joshanloo, 2013; Spanish adaptation carried out in Article 4 itself) - *Patient Health Questionnaire* (PHQ-9; Spitzer et al., 2001; Spanish validation by Diez-Quevedo, Rangil, Sanchez-Planell, Kroenke, & Spitzer, 2001) - *Subjective Happiness Scale* (SHS; Lyubomirsky & Lepper, 1999; Spanish version by Extremera & Fernández-Berrocal, 2014)	- Fear of happiness - Depression - Happiness

5.3. Instruments

The methodological approach taken in this thesis is a quantitative methodology based on self-report measures. It was considered that quantitative measures would usefully supplement and extend the study of happiness in relation to the selected variables. The scales used are presented below:

Emotional Intelligence

The *Trait Meta-Mood Scale* (TMMS-24; Salovey, Mayer, Goldman, Turvey and Palfai, 1995; Spanish version: Fernández-Berrocal, Extremera, & Ramos, 2004) was used to mesure the construct of EI. This instrument comprises 24-items assessing perceived EI that provides scores for three dimensions: mood attention, emotional clarity and mood repair. It uses a 5-point Likert scale (1 = *strongly disagree* to 5 =

strongly agree). A sample item for each of the facets is: "*I think about my mood constantly*" (mood attention), "*I am usually very clear about my feelings*" (emotional clarity), and "*Although I am sometimes sad, I have a mostly optimistic outlook*" (mood repair). The reliability estimates of this scale were good in Article 1 ($\alpha_{general}$ = .88; $\alpha_{mood\ attention}$ = .88; $\alpha_{emotional\ clarity}$ = .88; $\alpha_{mood\ repair}$ = .85 for) and Article 3 ($\alpha_{general}$ = .86; $\alpha_{attention}$ = .87; $\alpha_{clarity}$ = .87; and α_{repair} = .83).

Humor

The *Phophikat-45* (Ruch & Proyer, 2009; Spanish validation of Torres-Marín, Proyer, López-Benítez, & Carretero-Dios, 2019) was used to assess three dispositions toward ridicule and laughter: gelotophobia – the fear of being laughed at (sample item: "*When others make joking remarks about me I feel being paralyzed*"); gelotophilia – the joy of being laughed at (sample item: "*I enjoy it if other people laugh at me*"); and katagelasticism – the joy of laughing at others (sample item: "*I enjoy exposing others and I am happy when they get laughed at*"). The questionnaire is composed of 45 items on which respondents answer using a four-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*). Reliability estimates in Article 2 were good for the three components (α = .87 for gelotophobia; α = .84 for gelotophilia; α = .82 for katagelasticism).

The *BenCor* (Ruch, 2012; Spanish validation: Heintz et al., 2018) was used to evaluate benevolent humor (sample item: "*Humor is suitable for arousing understanding and sympathy for imperfections and the human condition*") and corrective humor (sample item: *"I like to ridicule moral badness to induce or increase a critical attitude in other people"*). The scale comprises 12 items on which participants rate their agreement using a seven-point Likert-type scale (1 = *strongly disagree* to 7 = *strongly agree*). In Article 2, reliability estimates were good for both benevolent humor (α = .77) and corrective humor (α = .84).

Optimism

The *Life Orientation Test - Revised* (LOT-R; Scheier, Carver & Bridges, 1994; Spanish version of Ferrando et al., 2002) was used to assess optimism. It is a scale composed of four filler items and six items (three positively and three negatively worded) evaluating whether people expect good or bad outcomes in life using a 7-point Likert-scale (0 = *strongly disagree* to 7 = *strongly agree*). Although there is an

academic discussion regarding the underlying structure of optimism, a recent study recommended the use of this instrument in its assessment (Eichner, Kwon, & Marcus, 2014). A sample item is "*In uncertain times, I usually expect the best*". In Article 3 the reliability estimates were acceptable for optimism (α = .69) and pessimism (α = .66).

Fear of happiness

The *Fear of Happiness Scale* (FHS; Joshanloo, 2013; translated and validated in Spanish in the same article) is a 5-item scale that assesses the belief that happiness is usually followed by misfortune and has bad consequences. Participants responded on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*) to what extent they agree with the presented statements. A sample item is "*Disasters often follow good fortune*". Reliability estimates were good in Article 4 (α = .78).

Depression

The *Patient Health Questionnaire* (PHQ-9; Spitzer et al., 2001; Spanish validation of Diez-Quevedo, Rangil, Sanchez-Planell, Kroenke, & Spitzer, 2001) is a 9-item depression-screening tool that assesses 9 symptoms that conform the diagnostic criteria of DSM-IV major depressive disorder. It asks respondents to rate in a 4-point categorical scale (0 = *not at all*; 1 = *several days*; 2 = *more than half the days*; 3 = *nearly everyday*) the frequency of depressive symptoms experienced over the last week. It can be used for clinical and research purposes. A sample item is "*Over the last 7 days (I have been bothered by) little interest or pleasure in doing things*". The internal consistency was good in Article 4 (α = .89)

Happiness

The *Subjective Happiness Scale* (SHS; Lyubomirksy & Lepper, 1999; Spanish version of Extremera & Fernández-Berrocal, 2014). This is a 4-item (one reversed) survey in which participants must rate to what extent they feel characterized by happiness statements using absolute ratings, peer-relative ratings and brief happiness descriptions on a 7-point Likert scale. A sample item is "*Compared with most of my peers, I consider myself…(less happy/more happy)*". The reliability estimate of this scale in the presented articles was acceptable (α = .63 in Article 1; α = .67 in Article 2; α = .65 in Article 3; α = .66 in Article 4).

Life satisfaction

The *Satisfaction with Life Scale (*SWLS; Diener, Emmons, Sem & Griffin, 1985; Spanish adaptation of Vázquez, Duque & Hervás, 2013) was used to measure the satisfaction with overall life. This is a 5-item questionnaire that evaluates the degree of satisfaction with life as a whole. Participants are asked to rate their satisfaction with life on a 7-point Likert-scale (*1 = strongly disagree* to *7 = strongly agree*). A sample item is "*So far I have gotten the important things I want in life"*. The internal consistency of this scale in the presented articles was good (α = .83 in Article 1 and 3).

5.4. Statistical analysis

Quantitative data analyses were carried out using the statistical package SPSS 24.0 (IBM Corp., 2016) and Mplus v 7.2. (L. K. Muthén & Muthén, 2017). Descriptive data and Pearson correlations were generated in each article. More specifical analysis included SEM, Latent Class Analysis (LCA) and regression models, which are presented following. All the statistical analyses carried out were considered statistically significant when the p-value was <.05.

5.4.1. Article 1: Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model

Due to the lack of the multivariate normality all of the analyses were conducted using maximum likelihood estimation with robust standard errors. No correlations between residuals were allowed in any of the analysed measurement models.

To test the first hypothesis, we assessed whether the bifactor model represents the EI structure well. The bifactor allows to study the role of domain specific factors that are independent of the general factor (Chen, Jing, Hayes & Lee, 2013), because the overall score is not the result of the specific scales' common variance, but it is the result of the items' shared variance being hypothesized to have something in common. The bifactor model enables not only to analyse the general variance explained by the bifactor, but also to analyse the additional common variance among cluster of items with highly similar content (Reise, Moore, & Haviland, 2010). In such terms, the bifactor can be understood as a result of what is common between the items (general variance), which is an addition to the item domain

specificity (group variance; Rodriguez, Reise, & Haviland, 2016) and each of these is hypothesised to introduce a new quality leading to better understanding the analysed constructs. Chen et al. (2013, p. 1036) listed two central advantages of the bifactor model: 1) it permits simultaneous tests of the association of an outcome variable with the general latent factor and the unique contributions of the specific factors that are distinct from the general construct (i.e., in regard to the current study, this would allow to test the associations of the *e*-factor and specific emotional facets with SWB indicators); and 2) it can be used to identify a factor, which no longer remains as the unique contributor when the common variance is taken into account.

In the bifactor model, each item was allowed to load on the bifactor and just on one group factor. All other loadings were fixed to zero and all factors, including the bifactor, were specified to be orthogonal (Reise, Scheines, Widaman, & Haviland, 2013). In interpretation of the results, if the strength of the factor loading is high on both the bifactor and the group factors then it is plausible to interpret both, as each of them adds something unique from itself. If the strength of the factor loadings is high on the bifactor but low on the specific factors – only the overall score should be interpreted since the specific factors do not yield any added value. Finally, if the strength of the factor loadings on the bifactor is low and is high on the specific factors – only the latter are justified to interpret. In the current study we expected the strength of the factor loadings to be high on both, the bifactor and group factors, and thus – this would allow interpreting the results of both to see what the specific factors add beyond the overall score.

To verify the EI structure, we analysed competitive measurement models of EI: 1) the three-correlated factors, 2) the one-factor, 3) the higher-order factor, and 4) the bifactor model. In respect to the measurement models of the SWLS and SHS, we only tested whether the one-factorial structure fits the data well. In the assessment of the tested models we relied on the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Residual (SRMR), which values should be above .95 for CFI and below .05 for RMSEA and .08 for SRMR for good or above .90 and below .08 for acceptable fit respectively (Byrne, 1994; Kline, 2015). In addition to the approximate fit indices, we also analysed the Bayesian Information Criterion (BIC), which compares the information explained by the nested models – the lower its value, the preferred should be the model (Kline, 2015). In interpretation, we also took into account an effect for the models with low number of degrees of freedom, in which RMSEA tends to produce artificially high results (Kenny, Kaniskan, & McCoach, 2015).

To test the relationship of EI with SWB indicators, we analysed the Structural Equation Model (SEM) in which EI predicted happiness and life satisfaction. We used the same model fit evaluation criteria as described above. To test the third hypothesis, we compared whether the regression estimates of EI on SWB indicators are equal across students and employees. This procedure is defined as the assessment of the structural equivalence. A necessary prerequisite for this analysis is verification of the metric level of invariance across the compared samples (Kline, 2015), which is a part of the multigroup confirmatory factor analysis (MGCFA) assessment. There are three basic levels of measurement invariance: configural – which assesses the possible differences in the basic factorial structure across compared groups; metric, which assesses (through constraining factor loadings to be equal across compared groups) whether participants understand the construct in the same manner; and scalar, which assesses (through additional constraining of the item intercepts to be equal across compared groups) whether participants understand all of the test items in the same manner (Meredith, 1993; Van de Shoot, Lugtig, & Hox, 2012). Establishing metric invariance allows to test for structural equivalence, which is the main objective of the current paper, while establishing scalar invariance allows to compare scores in the latent means of the compared groups. In the evaluation of the MGCFA models we used criteria proposed by Chen (2007), which suggests that: the evaluation of the configural model should be well fitted to the data (i.e., at least CFI > .90; RMSEA/SRMR < .08); the differences in fit indices between configural and metric model should not exceed .010 for CFI, .015 for RMSEA and .030 in SRMR; and finally, the difference in fit indices between metric and scalar models should not exceed .010 in CFI, .015 in RMSEA and .010 in SRMR.

5.4.2. Article 2: Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness

In order to test the unique effect of virtuous humor and the dispositions towards ridicule and laughter on happiness, we analysed five different linear regression models in which happiness was introduced as a criterion and the different forms of humor were introduced as predictors (controlled for age and gender in all models). The predictor variables in the tested models were as follows: virtuous humor and the dispositions towards ridicule and laughter predicted happiness as follows: (Model 1) benevolent and corrective humor; (Model 2) gelotophobia, gelotophilia, and katagelasticism; (Model 3) gelotophobia, gelotophilia, katagelasticism, and

benevolent humor; (Model 4) gelotophobia, gelotophilia, katagelasticism, and corrective humor; (Model 5) gelotophobia, gelotophilia, katagelasticism, as well as benevolent and corrective humor.

Transcultural research indicated that scores higher than 2.5 can be considered expressions of gelotophobia (Proyer et al., 2009) and on this basis five categories could be identified: (1) non-gelotophobes (scores lower than 2); (2) borderline fearful (scores from 2 to 2.5); (3) little expression of gelotophobia (scores from 2.5 to 3); (4) substantial expression of gelotophobia (scores from 3 to 3.5); (5) highly fearful of being laughed at (scores from 3.5 to 4) (as cited in Torres-Marín et al., 2017). We implemented these cut-offs into the descriptive analysis to examine the number of gelotophobes in our sample. With the aim to investigate if differences in the presence of this trait could lead to differences in happiness, we conducted a one-way ANOVA to compare the effect of gelotophobia on happiness in the four groups. Due to lack of literature regarding categories and thresholds in gelotophobia and katagelasticism, we were unable to conduct ANOVA analysis in these two humor traits.

5.4.3. Article 3: What makes the glass half full? Emotional intelligence, happiness and life satisfaction as differentiating characteristics between optimists and pessimists

Firstly, as a preliminary check, we tested whether each measure was a structurally valid instrument in a sample using confirmatory factor analyses (CFA). After verification of the measurement model, we extracted the latent means, which were found superior to the summated scores owing to the control of the shared variance and the measurement error (Kline, 2013). Secondly, we tested how people differ in being optimistic and pessimistic. We used latent class analysis (LCA) and its extension – latent class regressions (LCR). The goal of LCA is to find the smallest number of subgroups of individuals sharing similar characteristics based on a combination of the observed variables, and the goal of LCR is to use external variables as a predictor of membership of a given subgroup (which answers the question of whether people varying in the intensity of an external variable differ in the probability of class membership). We analysed whether it is possible to distinguish subgroups of people who differ in their intensity of being optimistic and pessimistic, and we also tested whether the different intensity of happiness, life satisfaction and EI can predict belonging to the differentiated classes.

We analysed the following measurement models: 1) the model of LOT-R (Scheier et al., 1994) comprising two correlated factors measuring optimism and pessimism, each loaded with three respective items; the models of 2) SWLS (Diener et al., 1985), and 3) SHS (Lyubomirsky & Lepper, 1999) as consequently confirmed within the literature (Pavot & Diener, 2009; Extremera & Fernández-Berrocal, 2014) were composed of one latent factor loaded with five (SWLS) and four items (SHS); and finally, the model of 4) TMMS-24 (Salovey et al., 1995) as recently suggested (Blasco-Belled et al., 2019) was analyzed as the bifactor model in which all items loaded the uncorrelated general EI factor and each of the eight respective items loaded specific uncorrelated factors of mood attention, emotional clarity and mood repair. To evaluate the fit of these measurement models, we followed the standard criteria of CFI > .90 and RMSEA < .08 (Byrne, 1994). We used the robust maximum likelihood estimation for all models tested, and no residuals were allowed to covary.

To determine how many classes of people should be extracted, we followed a four-step procedure used by Wetzel, Leckelt, Gerlach and Back (2016): 1) in each latent class model, we evaluated the Bayesian Information Criterion (BIC; Schwarz, 1978), the lowest value of which suggested the best-fitting number of classes (Li, Cohen, Kim, & Cho, 2009); 2) the classes distinguished should be interpretable; 3) the size of the distinguished classes should be considerable; and 4) the manifest allocation to the classes should be characterized by overall certainty.

5.4.4. Article 4: Fear of happiness through the prism of the dual continua model of mental health

The structural models of the measures used were evaluated via confirmatory factor analyses (CFA). FHS and SHS one-factor models were evaluated, whereas two competing models of PHQ-9 were tested according to previous research – the original one-factor model (Spitzer et al., 2001). To test the hypotheses, we analyzed an SEM model in which two indicators of the dual continua model of mental health (depression as an indicator of mental illness and happiness as an indicator of mental health) predicted fear of happiness.

Because no adaptation of the FHS in Spanish had been reported in the literature, the original scale was translated. Using the back-translation approach, the five items were translated from the original English version into Spanish by two native Spanish speakers. A third native Spanish speaker aggregated the two translated versions to obtain an agreed version of the scale. A bilingual English-Spanish speaker back-

translated the agreed version to identify any mismatch or misunderstanding in the construction of the adaptation. Once agreed, the final version of the translation was sent to the original author of the scale to approve its adaptation.

To evaluate the model fit we relied on the CFI and the RMSEA. Indications of good model fit will be a CFI $\geq$ .95 and a RMSEA $\leq$ .08 (Schermelleh-Engel, Moosbrugger, & Müller, 2003).

6 RESULTS

6.1. Emotional Intelligence Structure and Its Relationship with Life Satisfaction and Happiness: New Findings from the Bifactor Model

Blasco-Belled, A., Rogoza, R., Torrelles-Nadal, C., & Alsinet, C. (2019). Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model, *Journal of Happiness Studies,* 1–19.
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Abstract

Emotional intelligence (EI) has been found to generally predict subjective well-being (SWB) indicators such as life satisfaction and happiness. Concerning the specific abilities of trait EI, i.e., mood attention, emotional clarity and mood repair, research has largely demonstrated that emotional clarity and mood repair are the strongest predictors of SWB indicators, whereas mood attention has been relegated to a secondary role. To clarify pre- vious inconsistencies, we tested EI by means of the bifactor model because it allows for a better comprehension of the complex nature of EI. The current paper was composed of two studies: Study 1 examined the prediction of SWB indicators by EI and its dimensions in the bifactor model; and Study 2 analyzed the differences in EI and SWB indicators across uni- versity students and employees. Results of Study 1 demonstrated that the structure of EI is best represented by the bifactor model with a general *e*(motional)-factor and three specific emotional abilities. Mood attention was a negative predictor of SWB indicators, whereas mood repair was a positive predictor, and emotional clarity was non-significant. Study 2 showed that employees and university students did not differed in how EI predicted SWB indicators. These findings evidenced a shift in the study and measurement of EI. Further implications of this paper are discussed.

Keywords: Emotional intelligence, subjective well-being, happiness, life satisfaction, bifactor model, measurement

6.2. Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness

Blasco-Belled, A., Rogoza, R., Torrelles-Nadal, C., & Alsinet, C. (2019). Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness. *Current Psychology,* 1–9.
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Abstract

There are different concepts of humor: virtuous humor (i.e., benevolent and corrective humor) which represents the morally good, and three dispositions towards ridicule and laughter, namely the fear of being laughed at (gelotophobia), the joy of being laughed at (gelotophilia), and the joy of laughing at others (katagelasticism). In the current study, we aim to investigate the relationship of virtuous humor and dispositions towards ridicule and laughter with happiness. A sample of 229 Spanish undergraduates completed self-reports of the corresponding measures. Regression analyses revealed individual differences in humor predicting happiness. Gelotophobia and corrective humor were negatively associated with happiness, whereas gelotophilia and benevolent humor were positively associated with happiness. The effect of gelotophilia on happiness may be due to the existing relationship between gelotophilia and benevolent humor. Our study extends prior research into the contribution of novel forms of humor to positive outcomes and replicates important findings on the relationship between humor and happiness. In sum, the results demonstrated that virtuous humor and dispositions towards ridicule and laughter can be adequately assessed among Spanish samples, and that it is important to consider novel forms of humor in the study of happiness.

Keywords: gelotophobia, gelotophilia, katagelasticism, benevolent humor, corrective humor, happiness.

6.3. What makes the difference? Understanding clinical implications from differentiating optimists and pessimists using the person-oriented approach

Blasco-Belled, A., Rogoza, R., Torrelles-Nadal, C., & Alsinet, C. (submitted July 2019). *International Journal of Psychology.*

Abstract

Research on optimism has provided empirical arguments about the importance of this trait on well-being. However, there is less evidence about what makes someone an optimist or a pessimist. The aim of our study was to examine the trait-like configurations of optimists and pessimists based on differences in emotional intelligence (EI), happiness and life satisfaction. For this purpose, from the person-centered approach we used latent class analysis and latent class regressions to analyze the differences between subgroups on *N* = 1164 young adults. As a combination of high- and low- levels of optimism and pessimism, five meaningful classes of people were differentiated of optimists, pessimists and those in-between. EI and happiness were the distinguishing characteristics of optimists, whereas life dissatisfaction was characteristic of pessimists. Our results encourage the refinement of strategies used in psychology practice to promote optimism and its related outcomes.

Keywords: optimism, pessimism, emotional intelligence, happiness, life satisfaction.

6.4. Fear of happiness through the prism of the dual continua model of mental health

Blasco-Belled, A., Rogoza, R., Alsinet, C. & Torrelles-Nadal, C. (submitted November 2019). *Journal of Happiness Studies.*

Abstract

The current study attempts to investigate the relationship of fear of happiness from the lens of the dual continua model of mental health, which entails instances of positive factors (e.g., happiness) and absence of clinical risk factors (e.g., depression). A Structural Equation Model (SEM) was analyzed to examine whether depression (as indicator of mental illness) and happiness (as indicator of mental health) predicted fear of happiness (N = 254 adults). Results indicated that fear of happiness was positively and negatively predicted by depression and happiness, respectively. Fearing happiness might act as a maladaptive self-verifying motive used to enhance one's perspective of the world. Since modifications of maladaptive cognitive patterns (such as seeing happiness as averse) have already been applied to enhance mental health, our study extends the scope in which fear of happiness can have valuable implications in applied psychology.

Keywords: fear of happiness, mental health, happiness, depression, dual continua model of mental health

7 | DISCUSSION

7.1. Specific discussion of the four papers

In view of the four studies embedded in this thesis, some conclusions can be drawn about the association between several well-being-related measures (e.g., happiness, life satisfaction and mental health) and well-being-related outcomes (e.g., EI, optimism, humor and depression). Using different methodological approaches such as the bifactor model, SEM and the person-centered approach, this research has redressed the inconclusive results reported in previous research and presents illuminating findings in the lines of inquiry.

7.1.1. Article 1: Emotional intelligence structure and its relationships with happiness and life satisfaction: New findings from the bifactor model

The first study attempted to analyse the underlying structure of the EI construct and its relationship with two measures of well-being, namely life satisfaction and happiness. Being a construct widely investigated in psychology, EI accumulated few inconsistencies regarding structure measurement and the effect of EI components on well-being measures. By introduction of the bifactor model, we were able to overcome the structure measurement limitations and to separate each of the three emotional facets in order to examine their unique contribution to life satisfaction and happiness beyond the *e*-factor. Based on our results we suggest to measure EI, from now onwards, as composed of an *e*(motional)-factor that contains shared information that explains the general self-perceived ability to reason about emotions, as well as three independent specific emotional facets that provide additional information beyond the *e*-factor (mood attention, emotional clarity and mood repair).

The specific facet of mood attention turned out to be a negative predictor of life satisfaction and happiness when factored out, suggesting that higher levels of emotional attention are related to a lower sense of SWB being measured by happiness and life satisfaction. Although the majority of the studies gathered null associations between these variables (see Sánchez-Álvarez et al., 2015), high mood attention was previously proposed to cause a predisposed sensitivity to track more stress and symptomatology and thus prompt discomfort (Goldman, Kraemer, Salovey, 1996) and hinder engagement in efficient regulatory strategies (Boden & Thompson, 2015) – from the perspective of the bifactor EI model, the role of mood attention might help explain the results of these previous studies. Second, the

specific facet of emotional clarity was suggested to ease fluid thinking and adaptive action (Delhom et al., 2017) and therefore be a key predictor of life satisfaction and happiness (Sánchez-Álvarez et al., 2015; Extremera et al., 2011); nonetheless, in our study it appeared as non-significant when the shared variance of the *e*-factor was accounted for, proposing a new understanding of the possible effects that discriminating emotions has on SWB indicators. Third, the specific facet of mood repair similarly appeared as a strong predictor of life satisfaction and happiness in the literature since it might contribute to select and exhibit appropriate regulatory strategies —such as positive reappraisal, expressing feelings, and social-support seeking behaviours (Boden & Thompson, 2015; Extremera et al., 2011). Based on the bifactor EI model, our results showed the positive unique contribution of mood repair to life satisfaction and happiness, which is in line with the cited studies.

Although EI is generally associated with well-being measures, the grained-level performance of mood attention, which has been commonly relegated to a secondary role, may help address more complex tasks and direct our thinking and behavior for adaptive coping. Our results suggest that the more we attend to our emotions, the less satisfied and happy we might be; if this was so, and according to functional perspectives (Lench, Darbor, & Berg, 2013), when we focus excessively on emotional content, the thinking and behavioral systems would be drained in a way that decrease our sense of well-being. It could be plausible that if we over-attend our emotions we may misguide the rest of our affective resources and the effectiveness to engage in adaptive strategies consistently drops.

Savouring strategies enhance the effect of positive emotions, whereas dampening strategies decrease the effect of positive emotions (Wood, Heimpel, & Michela, 2003). The frequent use of savouring strategies and the infrequent use of dampening strategies may be the mechanism through which emotionally intelligent people are able to experience greater life satisfaction and happiness (Szczygieł & Mikolajczak, 2017). Contrary to the view of mood repair as the essential specific facet to promote SWB, our results suggest that the specific emotional facet of mood attention may also be essential, for instance, to help identify in which situations and under what circumstances we need to engage in such strategies. Thus, an excessive attention could decrease the capacity to regulate them (Boden & Thompson, 2015) and cause a feeling of confusion or overwhelm (Gohm, 2003). Drawing on our findings, future research should investigate the relationship between EI and different outcomes from the lens of the bifactor EI model so as to clarify the effect of the *e*-factor and each specific emotional facet.

Another contribution from the first study concerns the non-significant differences in the relationship of EI with happiness and life satisfaction found in two samples: college undergraduates and employees of a social organization. Results may suggest that the mechanisms of EI are indeed adaptive to the corresponding evolutionary stage or occupational condition. Perhaps individuals are capable of capturing, understanding and using emotional information according to the surrounding demands – if it was not the case, we possibly might have found higher results in employees concerning EI and SWB indicators than in university students. It is nevertheless important to note that the *e*-factor and the specific emotional facets remained as significant predictors.

It is known that EI and SWB can vary across the lifespan (Carstensen et al., 2000), mostly due to evolving factors such as age and employment conditions (Keyes & Waterman, 2003). The knowledge accumulated through lifelong experience allows us to gather more information about how we responded to major life events and thus to enhance our emotional skills. However, our results demonstrated that this is not fully supported because a difference in age and work experience did not cause any significant variation in EI and SWB indicators. Wilson and Gilbert (2005) suggested that we need to understand our affective responses in front of life events; if we do not clearly establish explanations of the emotions that arise in the face of profound events, we may feel unpleased. It is precisely in high-emotional situations where we draw more attention to our moods (Boden & Thompson, 2015); for instance, it would be easy to remember where we were on the September 11th terrorist attacks, or the weather on the day our children were born. For this reason, major life events become a proper scenario to refine the way we attend, understand and regulate our emotions (Boden & Thompson, 2015).

To summarize, the first article contributed to a more accurate measurement of the EI construct and to the scrutinization of the relationship with happiness and life satisfaction, with two samples in different evolutionary stages. SWB measures, in this case happiness and life satisfaction, were predicted by mood attention (negatively) and mood repair, irrespective of the sample nature. This finding may help scholars and professionals from diverse fields craft more detailed interventions that aim to improve well-being. For instance, university communities interested in providing orientation or mentoring services might keep in mind the importance of attending to and managing affective information to boost happiness and life satisfaction. Likewise, within the setting of healthy organizations, managers interested in building a motivating and nurturing working environment might also

consider such findings when issuing organizational policies. Without forgetting clinicians and counsellors, the reported findings may be of interest, especially in two ways: first, when recommending practices to boost well-being, such as devising strategies aimed at up-regulating and maintaining positive emotions; second, when providing emotional self-awareness techniques (e.g., body screening) aimed at improving attention to emotional information. The last point requires specific mention since, in light of our results, an optimal level of attention is required in order to improve life satisfaction and happiness. Scholars may be aware of the fact that regulating one's affective states is important, but it should also be noted that missing emotional information may bring unfavorable outcomes. This is in line with the affect-as-information theory presented in the introduction, which posited that emotions facilitate information about context and help to cope with environmental demands (Schwarz & Clore, 1983).

7.1.2. Article 2: Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness

As mentioned in the literature review, scholars have shown an increasing interest in examining new forms of humor, such as morally-guided humor (Ruch & Heintz, 2016) as well as expressions of humor that entail harm to oneself or others (Greengross & Geoffrey, 2008). The second article of this thesis sought to investigate the relationship of virtuous humor and the dispositions towards ridicule and laughter with happiness. Since few studies have investigated the association of virtuous humor and the dispositions towards ridicule and laughter with happiness, this study provided an empirical test of these relations and contributed to validate new Spanish humor scales, more concretely the BenCor and the PhoPhiKat-45, recently introduced in the context of humor.

From the lens of virtuosity, benevolent humor was positively related and corrective humor was negatively related to happiness, thus our initial hypothesis was supported. Albeit corrective humor falls under the *light* humor category (Hofmann et al., 2019), one possible explanation of the negative relationship with happiness is that, at the moment of laughing, the person may feel unsatisfied with a potentially detrimental situation, and corrective humor is used to change it. Hence, negative feelings might emerge due to the divergence and nonconformity with the current situation, which is fought by means of corrective humor. Besides, although humor involves the virtues of humanity, wisdom, and justice (Beermann & Ruch, 2009a,

2009b), the act of criticizing others' wrongdoings may imply an uncomfortable situation with underlying negative emotions. Another possible explanation lies in the primary purpose of corrective humor: because it has an other-directed focus, its effect on happiness might be indirect or weaker (see Edwards & Martin, 2014). On the contrary, an attitude of accepting benevolently the world's incongruities and fellow mistakes without attempting any correction (benevolent humor) is associated with enhanced happiness. These two conceptualizations depict humor as a morally valued component that helps explain how people use humor to do good towards others and improve the world, and also distinguishes the different influences of benevolent and corrective humor on happiness.

Concerning the three dispositions towards ridicule and laughter, correlation analysis indicated that gelotophobia and gelotophilia were negatively correlated to each other, whereas katagelasticism was positively correlated with both gelotophobia and gelotophilia. Conversely, Ruch and Proyer (2009) reported a non-significant correlation between gelotophobia and kataglasticism. Literature about bullying has proved that those who have been bullied are more likely to be *bullies* (Haynie et al., 2001), so our results could indicate that people who feel the target of laughter in social situations may in turn be more prone to laugh about others.

Gelotophobia was negatively related to happiness, which is in agreement with previous studies (Samson et al., 2011; Proyer et al., 2012; Hofmann et al., 2017). Because gelotophobia entails difficulty in distinguishing between harmless and harmful contexts of laughter, it is frequent to misinterpret laughter as being maliciously directed towards oneself and the emotional responses usually involve low joy, along with high fear, anger, and shame, causing detrimental effects such as social withdrawal (Platt, 2008; Ruch et al., 2014; Hofmann et al., 2017). Prior research suggested that emotional misinterpretations or difficulties in attending affective information might lead to lower levels of happiness (Blasco-Belled et al., 2019). Furthermore, Proyer et al. (2012) pointed out that people with gelotophobia see themselves as the object of mockery and anticipate ridicule in social interaction situations. Remarkably, our findings showed that increases in gelotophobia were associated with gradually lower levels of happiness, and the comparisons between different categories of this humor trait indicated that expressions of gelotophobia were indeed associated with lower happiness. These results suggest that the negative link between gelotophobia and happiness could be due to marked expressions of this humor trait. Hence, humor- and happiness-based interventions should consider this component in future studies.

Previous findings reported a positive relationship between gelotophilia and SWB indicators (Hofmann et al., 2017). Our findings partly confront these results, as gelotophilia was positively related to happiness but only when benevolent humor was not accounted for. Close to the concept of self-enhancing forms of humor (Martin et al., 2003), gelotophilia may involve a tolerant attitude to accept and use one's mishaps in order to fuel social interactions. It reinforces the assumption that gelotophilia might share some commonalities with virtuous humor; however, the presence of benevolent humor, where virtuosity is more pronounced, may modulate its effect on happiness. Gelotophiles do not pursue social compliance through derision but rather experience other's laughter as something positive and rewarding (Ruch & Proyer, 2009), so it seems plausible that seeking situations to make others laugh might contribute to their happiness. These results confirmed our hypothesis regarding the positive association between gelotophilia and happiness as a result of their shared variance. Thus, despite not being considered virtuous, gelotophilia may also share virtue-related humor elements stemming from the ability to laugh at oneself and the motivation to not injure others (McGhee, 1996; Beermann & Ruch, 2009a).

Finally, katagelasticism entails the tendency to ridicule people by means of laughter and contempt. Prior research showed a negative association with life satisfaction (Hofmann et al., 2017) but in our study the association with happiness was non-significant. Katagelasticists do not consider that there is anything wrong in making fun of others and they do not care about others' reactions and emotions; for this reason their humor could sometimes be rude and antisocial (Renner & Heydasch, 2010). Research showed that the use of damaging forms of humor was negatively related to well-being (Jovanovic, 2011; Martin et al., 2003; Ruch et al., 2018; Schneider et al., 2018a). One might argue that seeking situations to deride others presumably does not contribute to happiness because the virtuous element (i.e., betterment) is not present; however, the indulgence exerted throughout their attempts of laughing at others also does not provide instances of happiness. How this laughter disposition influences well-being and social interactions should be investigated further.

Although previous studies found significant associations of age with gelotophobia and katagelasticism (Hofmann et al., 2017) and benevolent and corrective humor (Heintz et al., 2018), our results reported no significant associations between age demographics and humor measures, keeping with Hofmann et al. (2019). Our findings showed that the effect of gender was significant for gelotophilia, katagelasticism, benevolent and corrective humor. This is partly in consonance with

previous research reporting individual differences on katagelasticism (Hofmann et al., 2017) and corrective humor (Heintz et al., 2018), but in disagreement with previous studies reporting no gender effects on virtuous humor (Hofmann et al., 2019).

Together, these results provided evidence of the complex role that humor exerts on happiness. Benevolent and corrective humor showed different relationships: while embracing reality and accepting life's setbacks is a powerful source for promoting happiness, pointing out and correcting others' wrongdoings or one's current situation seems to be detrimental to happiness. Perhaps corrective humor is used to fight unsatisfying or adverse situations that underlie negative feelings. Similarly, the dispositions towards ridicule and laughter also present distinct patterns in their association to happiness: the fear of being laughed at is detrimental for people's sense of well-being, yet the joy of making others laugh at one's own expense seems to contribute to happiness. This contribution is nevertheless subjected to benevolent humor and might be limited under certain circumstances. Most remarkably, our study extended prior research in the relationship of novel forms of humor to happiness (Hofmann et al., 2017; Heintz et al., 2018), put forward a mechanism by which the positive relationship between gelotophilia and happiness is presumably the result of the connection between gelotophilia and benevolent humor, and validates the Spanish adaptation of recently developed humor scales.

7.1.3. Article 3: What makes the glass half full? Emotional intelligence, happiness and life satisfaction as differentiating characteristics between optimists and pessimists

The primary goal of the second article was to investigate happiness from the lens of the person-centered approach. The study rooted on the predictor-outcome dichotomy of happiness (see section *3.7*.), thus happiness was measured as predictor of optimism [and pessimism]. The purpose was to provide a more comprehensible understanding of happiness as an antecedent of optimistic thinking. To that end, we employed the person-centered approach, which allows referring to "optimists and pessimists" instead of "optimism and pessimism"; simply put, in this approach optimism was assessed as a personal qualities rather than an outcome.

We established affective and cognitive characteristics to identify individuals with a similar configuration of traits (*in*-group) that, in turn, made them different from individuals in other groups (*between*-group) (Laursen & Hoff, 2006). The categorization of groups was based on the combination of EI, optimism and life

satisfaction according to the existing relationship between these constructs, which has been largely reported in the literature (Carver et al., 2010; Extremera et al., 2009; Mayer & Stevens, 1994).

Research on optimism has gained increasing interest during last years as part of the growing body of research devoted to study the flourishing aspects of life. Regardless of research reporting the different outcomes of optimism and pessimism across different domains (i.e., mental and physical health) and the mechanisms underlying such differences (i.e., coping and response behavior), there is a gap in the study of the characteristics that define optimists and pessimists. Hence, identifying categories in which these configurations are based on a combination of properties that define them may entail an advance also in the study of subjective well-being.

When considering optimism a dimensional trait, one should avoid separating optimists from pessimists (Eichner et al., 2014), however, categories emerged in the this study due to a combination of the two dimensional poles. Results revealed that, within the studied sample, five different types of optimist-pessimist profiles emerged. The first class comprised people who were highly pessimistic and who did not see the world optimistically. The second class could be described as moderate – neither optimistic nor pessimistic. The third class was also moderate, but in addition to being moderate pessimists, they were less optimistic. The fourth class was similar to the second class in terms of their lack of optimism; however, they were also moderately pessimistic. Finally, the fifth class represented individuals who were highly optimistic and who did not see the world pessimistically. According to the upper and lower levels of these categories, we found that mood repair and happiness were the distinguishing characteristics between pure optimists and pure pessimists. Beyond that, a general EI capacity was needed to ensure an optimistic outlook, although it is worth mentioning that it was also representative of low-optimists and moderate-pessimists, suggesting that general emotional skills in the absence of mood repair are not enough for being optimistic. Interestingly, unsatisfied life appraisals were characteristic of pessimists but life satisfaction was not predictive of being optimistic.

Our results from the person-centered approach can complement findings from the variable-centered approach by explaining that mood repair contributes to better approach adversity and to build a brighter future expectancy. Those reporting high mood repair and happiness levels enjoyed a greater chance to see the world with an optimistic view and kept them away from being pessimistic. The affective mechanisms might be a crucial contributor for a positive outlook, which is in agreement with previous studies suggesting that affectivity is a mediator of

cognitive processes (Chang, 2002). Happiness could be treated as an indicator that favors being an optimist, and the absence of thereof along with the presence of life dissatisfaction may contribute to have negative outlook on life. This is in line with previous research reporting that unhappy people tend to dwell on negative events and engage in ruminative thoughts (Lyubomirksy, Kasri, & Zehm, 2000). Affective and cognitive characteristics may affect the coping strategies that, indeed, make someone an optimist. In particular, we speculate that mood repair favors the coping strategies of optimists since the ability to upregulate positive emotions is suggested to mediate the impact of EI on well-being (Szczygieł & Mikolajczak, 2017). According to the broaden-and-build theory of positive emotions (Fredrickson, 2001), a cheerful state can bring cognitive benefits such as undoing the effect of negative emotions and broadening the scope of attention. Based on that, happy people would be likely to enjoy a wider range of cognitive resources that promote positive expectancies.

A proper mood repair permits displaying appropriate regulatory strategies (Boden & Thompson, 2015), which contribute to build a set of physical, psychological and social resources (Fredrickson, 2001). Szczygieł & Mikolajczak (2017) found that EI was related to a greater use of savouring strategies. As drawn in the first study, it is conceivable that, if practitioners pursue building favourable expectancies, promoting regulatory strategies such as generating positive emotions at initial stages may facilitate engaging in a further optimistic outlook. An interesting contribution from this study is that happiness can indeed explain some of the mechanisms by which people pursue a *well*-lived life: being happy was, in this case, indicative of viewing a brighter future and adaptive coping. This study provided a deeper comprehension of the underlying mechanisms of optimism in that a general EI is not sufficient for being optimistic – but it should be also accompanied with a specific capacity to deal with negative emotions and nurture the positive ones, as well as with a feeling of happiness.

The identification and treatment of factors that cause discomfort has been the target of clinical psychology; on the other hand, positive psychology has focused upon the factors that contribute to a fulfilled life (Johnson & Wood, 2017). One may presume that this difference set positive and clinical psychology apart, albeit there is increasing literature proving that both areas seek for a common aim, which is to pursue well-being (see Wood & Tarrier, 2010). While the alliance between these two remained unexplored until recently, researchers are trying to find out how positive psychology can bring useful resources to clinical assessment and interventions. Clinical psychology is currently meeting new demands that bear different orientation

towards assessment (i.e., the person-centered approach) and treatment (i.e., positive interventions) (Johnson & Wood, 2017). More specifically, the person-centered approach is useful for distinguishing those who expect more good from those who expect more bad in life. This likely advances the development of evidence-based interventions focused on alleviating self-regulation and goal-directed behavior impairment (Carver et al., 2010). Eichner et al. (2014) suggested that optimism interventions should be based on making pessimists less pessimistic and helping them move toward the upper pole. With the aim to provide practical implications stemming from our findings, within the second study we discussed plausible applications and proposed several caveats for practitioners.

Cognitive reconstruction, which aims to develop alternative explanations for inaccurate life explanations and reported promising results in cognitive (Wright, Brown, Thase, & Basco, 2006) and clinical therapy (Eagleson et al., 2016), might be used to address life dissatisfaction at early stages of intervention. Likewise, positive imagery might be useful to repair pessimistic outlooks and trigger the benefits of optimism (Eagleson et al., 2016). A recent meta-analysis showed the efficacy of optimism-based interventions (Malouff & Schutte, 2017), suggesting that this trait is a source of advantage in clinical practice (Johnson & Wood, 2017), especially when applied to mood and anxiety disorders (Conversano et al., 2010). To promote optimism, and in line with our first study, practitioners could also refer to other strategies such as encouraging the recall of positive experiences and the maintenance of pleasure (i.e., savoring strategies) because they contribute to positive emotion regulation and happiness (Fredrickson, 2001; Szczygieł & Mikolajczak, 2017). The results of meta-analysis reporting the effectiveness of positive interventions (including optimism) in reducing symptomatology (Bolier et al., 2013; Sin & Lyubomirsky, 2009) reinforces the idea that optimism could help reduce discomfort and boost well-being.

To sum up, by identifying the concrete trait-like configurations underpinning optimists and pessimists, the second paper enhanced understanding of the differentiated role that specific personal characteristics may have in the contribution to optimism, and ultimately, to subjective well-being. The identification and treatment of factors that cause discomfort is now complemented by the employment of positive factors that contribute to a fulfilled life (Johnson & Wood, 2017). For instance, the inclusion of positive elements, such as optimism, can bring useful resources to psychology practice (Wood & Tarrier, 2010), especially considering that they are prospective predictors of mental health (Johnson & Wood,

2017). Since individual differences influence on positive psychological interventions (Shapira & Mongrain, 2010), the study of the affective and cognitive differences between these typologies may refine practices aimed at enhancing well-being. The practical implications of these findings require an advance to devise more effective interventions that may be used in psychology practice.

7.1.4. Article 4: Fear of happiness through the prism of the dual continua model of mental health

With the increasing need to assess the contributing and hampering facets of happiness and the mechanisms underlying depression, the purpose of the fourth article was to investigate the association of fear of happiness with two indicators of the dual continua model of mental health, namely depression and happiness. Recent studies have shown that many people may view happiness as a source of misfortune, thus fear of happiness beliefs have been incorporated as an important factor influencing mental health.

In this study, we found that depression positively predicted and happiness negatively predicted fear of happiness. The results are in keeping with previous studies reporting positive associations of fear of happiness with depression (Beblo et al., 2012; Gilbert et al., 2012; Gilbert et al., 2014; Raes et al., 2012) and negative links with life satisfaction (Joshanloo, 2013), SWB and PWB (Yildirim & Belen, 2018). Our findings further supported the initial suspicions of Joshanloo (2013) suggesting that high fear of happiness beliefs could lead to reduced happiness. In line with the definition of mental health (WHO, 2001), our results indicated that maladaptive beliefs about happiness can lead to detriments not only in positive outcomes such as happiness, but also in undesired outcomes such as depression. This is also consistent with the literature acknowledging beliefs about happiness as personal and cultural mechanisms that can influence the effect on well-being (Joshanloo et al., 2016).

The current findings add to a growing body of literature on the link between how people respond to positive emotions and the development of symptoms of depression, anxiety and stress (Beblo et al., 2012; Gilbert et al., 2012, 2014; Raes et al., 2012). A possible explanation might be attributed to the motives by which people modify behaviors to pursue desired outcomes, that is, mood repair. Based on a taxonomy of motives in mood repair, Tamir (2016) discussed that people seek to experience emotions that confirm their current affective state, irrespective of it being positive or negative, which are known as epistemic motives. For example, depressed

individuals tend to be more motivated to experience feelings of sadness compared to healthy individuals (Tamir, Millgram, Joormann, & Huppert, 2015). It may be the case that people with psychopathology seek maladaptive motives and therefore pursue unhealthy goals (Tamir, 2016); indeed, dysfunctional emotion regulation has been linked to psychopathology (Joormann & Siemer, 2014). This may be explained by maladaptive associations between motives and emotion goals (Tamir, 2016). Accordingly, those who feel depressed may tend to fear happiness and therefore avoid it as a response to self-verify their current affective state.

The maintenance of maladaptive motives may also interfere in the social sphere. This is the case of dialectical beliefs, defined as constraints on experiencing intensive emotions like too much happiness (Peng & Nisbett, 1999). It has been demonstrated that dialectical beliefs are subject to cultural differences and are more present in Eastern cultures, which seem to be more motivated to dampen positive emotions (Miyamoto & Ma, 2011). Taken together, these findings suggest that fearing happiness might act as a [maladaptive] self-verifying motive used to enhance one's perspective of the world. A plausible explanation may be that being fearful of experiencing highly positive states of mind makes people display dampening strategies that dispel the effect of positive emotions. It may be the case that, when happiness is avoided, people abstain from happiness-boosting stimuli, which subsequently results in diminished levels of overall mental well-being.

It is difficult to establish the causality of this phenomenon in light of the cross-sectional results, but one plausible explanation might lie in the ABC of psychology – that is, how thoughts, emotions and behavior are interconnected in response to contextual factors. Functional perspectives have established that internal states (i.e., emotions, thoughts and behavior) evolve to meet particular environmental demands (Lench et al., 2013). In line with this view, affective information influences the other two systems and causes changes in thought and behavior so as to adapt to a given challenge. Hence, our emotionally influenced actions may have a positive or negative impact on happiness depending on how we process the affective information. For instance, evidence from this perspective has shown that emotional processes play a role in executive functioning tasks related to the most evolved brain structure, such as decision-making or threat addressing (Sass et al., 2013). Drawing on functional perspectives, the link of fear of happiness beliefs associated with behavioral and emotional maladaptive mechanisms might result in detrimental effects to mental well-being.

Despite the benefits of happiness (De Neve, Diener, Tay, & Xuereb, 2013; Fredrickson, 1998, 2001; Szczygieł & Mikolajczak, 2017) and the effectiveness of happiness-boosting interventions (Hendriks et al., 2019; Sin & Lyubomirsky, 2009; White et al., 2019), some people still display aversion to experiencing positive feelings and states of mind (Joshanloo & Weijers, 2013). One may think that if happiness happens to be feared, all the possible benefits of promoting happiness might dissipate. An initial step to address this situation would be to tackle fear of happiness beliefs in interventions (Lambert et al., 2018). Other authors have suggested the possibility of tackling maladaptive self-verifying motives in emotional regulation by de-emphasizing fear of happiness beliefs in order to mitigate the motivation to pursue them (Tamir, 2016). Our study pointed to noteworthy implications for the practical field, wherein different types of psychotherapies or techniques could benefit from such information. Indeed, modifications of maladaptive cognitive patterns (such as viewing happiness as aversive) have already been applied to enhance mental health (Ruini, Albieri, & Vescovelli, 2015). Our study therefore extends the scope wherein fear of happiness may have valuable implications for clinical psychology.

7.2. General conclusions of the four articles

The remainder of this section expounds three main lines of reasoning that can be drawn from the findings reported in the four articles of this thesis. The purpose of these points is to bring together the results that emerged from the four articles so as to deduce general conclusions. As it is, three promising avenues for understanding happiness are its associations with past evaluations, emotional mechanisms and future expectancies.

7.2.1. A glimpse back at the past: How may life satisfaction judgments preclude happiness?

A significant finding to emerge from this thesis relates to the role that dissatisfied life judgments play in happiness. As pointed out previously, the study of emotional and cognitive processes that account for happiness is one of the prominent concerns in the science of subjective well-being (Lyubomirsky, 2001). There are many possible explanations that attempt to account for the factors contributing to the pursuit of happiness. This point considers a line of discussion that may have

explanatory value when considering the factors contributing to happiness: the evaluation of past life experiences.

Our results suggest that dissatisfied life judgments are a possible mechanism by which happiness seems to be attenuated. This rationale is grounded on the findings reported in Articles 2 and 3. More specifically, Article 2 suggested that, on some occasions, people make use of humor in an attempt to correct an unconformable situation, probably as a result of being dissatisfied with such situation. When life satisfaction judgments are made, people's experience may not be in consonance with what they actually wished for or expected. The theory that happiness is relative draws upon the question of comparing "life as it is" to "how life should be" based on perceived standards (Veenhoven, 1991). In such instances, the consideration that one disagrees with how one's life is going may elicit the implementation of personal strategies in efforts to reduce inconformity.

Turning to Article 3, dissatisfied life judgments accounted for individual differences between optimistic and pessimistic people, suggesting that negative evaluations of one's life increase the likelihood of adopting a pessimistic outlook on life. Negative life judgments imply feeling unhappy *with* the course of one's life but not necessarily feeling unhappy *in* one's life (Redelmeier & Kahneman, 1996). In fact, a study has revealed that those who feel dissatisfied tend to envision a happier future, but authors have speculated that the brighter future might be the result of overly biased expectations (Busseri et al., 2009). Indeed, those with more positive forecasting reported lower psychological functioning; there was a strong possibility that, in anticipating a better future, they may have failed to pursue the highly positive expected future, thus giving rise to more negative psychological outcomes (Busseri et al., 2009). Of particular relevance to this thesis, the foregoing indicates that poor life dissatisfaction is likely to be associated with lower psychological functioning.

Research has consistently provided evidence of the close relationship between the retrieval of past memories and the contemplation of future plans within the personal sphere (Tulving, 1985, 2002). In light of the available data from neuroimaging, neuropsychology and clinical psychology, it is known that the mechanisms involved in memory and future thinking activate similar neural regions (Szpunar, Watson, & McDermott, 2007). Although this does not necessarily imply that future thinking is rooted exclusively in past memory content, past memories can often provide useful information for goal-directed behaviors (Szpunar, 2010). Such consistency in the data means that a connection between the mechanisms involved

in evaluating past life judgments and expecting future life circumstances might also be considered. In the words of Suddendorf and Corballis (2007, p. 302), "the primary role of mental time travel into the past is to provide raw materials from which to construct and imagine possible futures". With some degree of certainty, we speculate that the effect of past life views on future expectancies might go through people's current affective state, implying that past dissatisfaction might influence how one currently sees the future.

Commenting on this issue in a study about immigrant satisfaction, Bălțătescu (2014) found that immigrant people were less happy but more satisfied than host people with the social and political conditions governing the receiving country. Put differently, they felt less happy *in* their lives but not necessarily *with* their lives. This phenomenon was explained in terms of social comparisons: at the time when well-being judgments were made, immigrant people took as the reference point the conditions of their home countries, and then compared them to those of the receiving countries. Interestingly, the social psychological processes underpinning this effect tended to dissipate among the second generation of immigrant people, presumably due to adaptation to the social context (Bălțătescu, 2014). This can be taken as an example of how evaluations of one's life are rooted in subjective interpretations of life conditions, as alluded to in the introduction. In this case, a retrospective outlook might have conditioned immigrant individuals to adjust their life judgments by considering the improvements in their present life conditions. Studies examining the tendencies by which people treat memories of positive and negative events have suggested that unhappiness may be the result of contrasting one's daily life with memories of happier times (Liberman, Boehm, Lyubomirksy, & Ross, 2009). In light of these results, present life conditions might contrast negatively with earlier histories of good fortune, and positively with earlier histories of adversity.

People tend to make decisions based on standard comparisons (Slovic, Finucane, Peters, & MacGregor, 2002). Often, these comparisons refer to weighing up the present against the past, which brings about different ways of dealing with earlier experiences. Although the tendency to dwell on past events is generally related to present unhappiness (Nolen-Hoeksema, Parker, & Larson, 1994) and a higher risk of psychopathology (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008), the effects of comparing past and present situations may also give rise to variations in happiness. Research has shown that comparing earlier experiences that were worse than the present situation may be beneficial. For example, people who suffered from chronic pain showed temporary gains in emotional well-being when they acknowledged the

potential benefits of their condition (Affleck, Tennen, Urrows, Higgins, & Abeles, 2000). Moreover, previous studies have indicated that reflecting on and savoring past positive experiences also contribute to greater happiness (Tversky & Griffin, 1991). Likewise, Liberman et al. (2009) showed that dwelling on positive life events, and not on negative ones, was linked to enhanced happiness, life satisfaction and optimism. By contrast, reflecting on happier past events has been related to attenuated happiness (Tversky & Griffin, 1991). Taken together, the way people deal with the act of thinking about past positive or negative events has an undeniable effect on the sense of present happiness. Caution must be applied in the sense that life judgments do not necessarily imply a sustained, recursive rumination about one's past, but rather a one-time overall evaluation.

The pursuit of happiness calls for an understanding of the conditions for happiness (Lyubomirsky, 2001; Veenhoven, 1991). Considering that life satisfaction evaluations entail appraising one's current life conditions from a retrospective frame, next I will explain how our results have the potential to extend knowledge about the role of life satisfaction in happiness. As I proceed, special care will be taken when reflecting on the available data. Thinking about how one has lived one's life, and therefore rating to what extent one is satisfied with the journey, might provide an opportunity to activate motivation mechanisms in an attempt to better current conditions and prevent future failures. Life satisfaction judgments can have explanatory value when considering how people are dealing with earlier experiences. It should be acknowledged, though, that potential cognitive biases play a role in judgment making (Ingram, Scott, Holle, & Chavira, 2003; Mezulis et al., 2004) and, more specifically, that impaired affective moods can lead people to selectively attend to negative information (Hamilton & Ingram, 2001; MacLeod & Salaminiou, 2001; Stegen, Diest, Van De Woestijne, & De Bergh, 2001).

Negative judgments might indicate that individuals are underlining more positive events when making the evaluation (e.g., "I used to be happier"), while positive judgments might imply that individuals are focusing more on negative events at the time of the evaluation (e.g., "Things used to be worse"). The negative valence might indicate that the contemplation of positive past events, unlike the negative ones, is something admired and quite desirous. This is the main reason why we advocate for the rationale that life dissatisfaction, which could be seen as a marker of well-being [in this case, life distress] (Damasio, 1994, 2001), can boost motivation towards plan-guided behaviors. In light of our results, being unhappy *with* one's life can reinforce being unhappy *in* one's life, but being happy *with* one's

life may not necessarily contribute to being happy *in* one's life (Articles 2 and 3). In fact, the results from Article 2 suggested that being nonconformist with a given situation could foster adherence to forms of humor that help to modify and reframe such a situation – in this case, people may feel displeased *with* their life at that very moment, and thus struggle to change circumstances in efforts to get things back on track. It is worth noting that, although seemingly counterintuitive, dissatisfied life judgments are acknowledged as being the result of putting more emphasis on past positive events (Liberman et al., 2009). Although the cross-sectional nature of the studies does not allow conclusions to be drawn about cause-effect associations among the studied variables, we can nevertheless propose that the way individuals contrast their life information may provide meaningful insights into the mechanisms involved in memory rehearsal and future planning. It should be noted that these conclusions are completely speculative in nature and therefore cannot be generally extrapolated without further research. Rather, they attempt to bring together the findings gathered throughout this thesis.

One promising opportunity of this realm stems from the efficacy of interventions aimed at promoting immediate happiness by reducing rumination. Research shows that this can be done in several ways. For instance, practitioners can help people to distract themselves and reduce sorrowful rumination, considered a maladaptive form of self-reflection (Lyubomirsky & Tkach, 2004); to savor recent positive past circumstances; and to make them contrast present life conditions with harder times in the past (Bryant, Smart, & King, 2005; Lyubomirsky et al., 2005). Likewise, investigators have also put forward effective practices for tackling negative cognitive biases. Although negative interpretation styles have typically been attributed to mood disorders (Duval & Silvia, 2001; Hallion & Ruscio, 2011; Ingram et al., 2003), non-clinical populations can also take advantage of interventions aimed at modifying negative interpretation styles. For example, training in cognitive bias modification offers potential practical implications, such as reducing threatening attention bias (Clifton, Hedley, Mountier, Tiszai, & Grimshaw, 2016) and reinforcing optimistic interpretative bias to reduce anxiety symptoms (Clifton et al., 2016). Training in cognitive bias modification attempts to neutralize the tendency to draw negative interpretations and instead foster more adaptive styles of interpretation, thereby enhancing emotional well-being (Clifton et al., 2016). A meta-analytical study established the effectiveness of cognitive bias modifications (Menne-Lothmann et al., 2014), for which training can, to some extent, be provided via smartphones (Yang et al., 2017). Such consistency in the data about the modification of maladaptive styles

of thought and the promotion of more adaptive patterns may encourage researchers and practitioners to apply these strategies in the non-clinical context. Happiness-increasing interventions might ponder the inclusion of such strategies as plausible tools to tackle dissatisfied life judgments and promote a sense of happiness. Prompting people to reflect on how they orient attention towards positive or negative circumstances, reinforcing positive contrasts (e.g., feeling satisfied with one's past experiences) as a reason to be happy and, therefore, generating more positive thoughts towards future plans may be deemed potentially powerful resources.

7.2.2. Handling the present: How do emotional mechanisms benefit happiness? New contributions from mood attention and [not so new] from mood repair

Another potential conclusion that can be drawn from this thesis is that the mechanisms involved in processing emotional information have a notable influence on happiness. This conclusion is grounded on the results from Articles 1 and 3, which suggest that emotional abilities need to be adequately managed when it comes to strengthening happiness. There is considerable convergence between the results reported in these papers in the sense that mood repair appeared as a happiness-booster. While in the first article mood repair related to increased happiness and life satisfaction, in the second study the EI component was characteristic – along with happiness – of optimistic people.

Another issue emerging from these findings relates essentially to mood attention, since much uncertainty still exists about the role of this EI facet. To date, the reported literature has been unable to reach a conclusion about the effect that mood attention exerts on happiness. The contributions from this thesis are consistent with a notion suggesting that the mechanisms responsible for attending to affective information can be detrimental to happiness if not handled properly. Some researchers have proposed that fussing over affective information could foster excessive monitoring of self- and other- emotional reactions. This may lead to a sensitivity to perceive more stress and symptomatology (Goldman et al., 1996), and hinder engagement in efficient regulatory strategies (Boden & Thompson, 2015). These results could have indirect implications for the other two facets of EI. Over-attending to emotional reactions may result in a higher probability of dwelling on negative thoughts that, in turn, might interfere with the proper functioning of the

mechanisms responsible for understanding and regulating emotions. One might argue that paying too much attention to emotional stimuli (what one is feeling or what the others seem to feel) can actually prevent one from availing oneself of information that is fundamental to decoding the perceived stimuli and understanding them. Ultimately, the lack of emotional comprehension might translate into engaging in ineffective regulatory strategies that, according to the results, are detrimental to happiness. Even though this upward spiral may not necessarily occur in the given sequence, the resulting effects could nevertheless be expected. Indeed, differences in experiencing and understanding emotions actually have consequences for emotional management and for everyday judgments and decisions (Gohm, 2003).

Although intricate, the findings may be interpreted such that a mid-point on the continuum ranging from “ignoring” to being “hijacked by” emotional information seems to be the most suitable level of mood attention for fostering happiness. This adds knowledge to a growing body of research interested in understanding the affective and cognitive mechanisms that cause and maintain happiness (Lyubomirsky, 2001), wherein EI has been proposed as a factor that can explain individual differences in the experiences of subjective well-being, including happiness (Extremera et al., 2011; Mayer & Stevens, 1994). Practical implications can be drawn from this finding. Although psychology practitioners have been advised about incorporating EI abilities training into interventions in adults (Fernández-Berrocal & Extremera, 2016; Salovey et al., 1995; Sin & Lyubomirsky, 2009), less attention has been paid to younger populations (Filella, Cabello, Pérez-Escola, & Ros-Morente, 2016). Periods with major biological and social transitions like adolescence involve crucial variations in levels of happiness (González-Carrasco, Casas, Malo, Viñas, & Dinisman, 2017; Montserrat, Dinisman, Bălțătescu, Grigoraş, & Casas, 2015). Besides being one of the key predictors of enhanced SWB, emotional abilities play an important part in adolescents’ classroom social climate and academic success (Ros-Morente, Filella, Ribes, & Pérez, 2017). Altogether, it makes sense that mood attention and mood repair could be great contributors to providing and maintaining durable levels of happiness across adult and young populations. Accordingly, interventions aimed at fostering happiness and EI abilities should consider multiple factors likely to interfere with the on-going course of happiness across the lifespan (Lyubomirsky & Layous, 2013).

These findings connect with a line of research focusing on the role of emotional information processing and affective regulation mechanisms. Dysfunctions in

emotional information processing can determine the way people perceive information and respond to the world (Gross, 1998). These dysfunctions can impede a correct emotional functioning (Phillips, Drevets, Rauch, & Lane, 2003). As such, the presence of mood disorders, and particularly of depression, can trigger greater sensitivity to attend to negative emotional information (Gollan, Pane, McCloskey, & Coccaro, 2008) and subsequently to lower happiness levels. People are inclined to experience emotions that are congruent with their current affective state (Tamir, 2016). As such, people with a positive affective state may be more inclined to search for experiences that facilitate the maintenance of positive mood, while people with a negative affective state may be more likely to engage in experiences that reinforce their negative mood. The consistent search for [in the latter case] negative mood-congruent emotions may instigate stimuli withdrawal and, therefore, induce unregulated mood attention and more errors in emotion recognition (Gollan et al., 2008).

It is important to note that, while mood attention pertains to the meta-experience of emotions – that is, a self-reflective state involving reflections and thoughts about one's emotions (Mayer & Stevens, 1994) – it cannot be denied that the way people perceive and manage emotions influences their social encounters (Ingram et al., 2003; Lopes et al., 2004). On the one hand, affective processing, which concerns the ability to perceive emotions, is thought to play a significant role in emotion recognition (Calvo & Nummenmaa, 2016). An inability to recognize emotional states has been associated with diminished quality of life, disturbed social functioning, and more suicidal attempts (Szanto et al., 2012). On the other hand, being able to regulate emotions has been linked to an enhanced quality of social relationships (Lopes et al., 2004). Notably, the relevance of mood attention also extends to the field of cognitive processing (e.g., Pourtois, Vanlessen, Bakic, & Paul, 2017), wherein the topic of cognitive biases has recently garnered a considerable amount of interest.

Since cognitive biases are thought to play a role in the development of mood disorders like anxiety, depression and the experience of negative affect (Gendolla, Abele, Andrei, Spurk, & Richter, 2005; Hallion & Ruscio, 2011), it is reasonable to argue that a self-focus on internally generated emotional information can be related to fewer pleasant experiences and therefore diminished happiness. A type of cognitive bias is self-focused attention (SFA), defined as a predisposition to be unduly aware of internally generated information over externally generated information (Ingram et al., 2003). Similar to mood attention, SFA can be beneficial to a certain extent. It has

been suggested that heightened SFA in depressed individuals accentuates the current negative affective state (Mor & Winquist, 2002), with problem-solving difficulties reported across non-clinical populations (Hamilton & Ingram, 2001). When this happens, certain types of interventions aimed at correcting the maladaptive patterns in the process of self-focus processing may be deemed beneficial (Nolen-Hoeksema, 2000).

Heightened SFA has been related to increased negative affective states (Duval & Silvia, 2001) and therefore directs more attention to somatic activity, being detrimental to the experience of well-being (Stegen et al., 2001). Indeed, research has suggested that SFA promotes somatic symptoms, but only when negative moods are also present (Gendolla et al., 2005). Based on these findings, it may well be that self-attention – in this case overly attending to one's emotions – makes internal affective information more salient to the person, thereby disturbing the experience of happiness. A plausible transfer between mood attention and mood repair in association with subjective well-being has been reported by Lischetzke and Eid (2003), who found that attending to emotions contributed to affective well-being only in the presence of an ability to regulate emotions. Hence, if someone is habitually paying attention to emotional information but is capable of appropriately implementing regulatory strategies, the detrimental effect of mood attention on happiness may be buffered. But the importance of the mechanisms implicated in attending to emotional information are rooted in evolutionary reasons. As suggested by Pryce et al. (2005), perceiving potentially negative stimuli from the environment serves as a protective and adaptive mechanism that helps to deal with environmental demands; mood attention in part serves the function of assuring survival, but conversely may hinder a relatively stable positive psychological condition.

7.2.3. A glimpse into the future: Why do expectancies play a significant role in happiness?

One of the most relevant findings of this thesis is that it synthesizes the notable importance of future expectancies in the field of happiness. The results of this investigation show that positive, adaptive expectations contribute to happiness. More specifically, having a positive life outlook in general, and a virtue-related humorous outlook in particular, seems to boost a relatively stable psychological condition of positive affect. An example of that refers to the relationship between

benevolent humor, which entails a positive humorous outlook of seeing the world with acceptance and benevolence, and happiness (Article 2). In contrast, engaging in negative or fearful expectancies, accounted for by beliefs that happiness should be avoided and that laughter can be potentially damaging in social interactions, appeared as impeding factors of happiness (Articles 2 and 4, respectively).

Laughing at oneself has been described as an important part of humor and mental health. For instance, Roberts (1988) claimed that laughing at oneself is a central element of the sense of humor. Laughing at oneself is also important when it comes to searching for life meaning, as being able to make the most of an unfavorable situation helps to find a purpose in life (Frankl, 2000). And although it requires skills that might be difficult to develop, laughing at oneself has been applied in some therapy programs in the context of mental health (Roberts, 1988). When laughing at oneself in front of an audience is used to overcome shameful or adverse situations rather than being "inwardly" experienced as a fearful or self-damaging condition (gelotophilia), laughing at oneself can instead be understood as a source of accepting and embracing one's own mishaps (Ruch & Proyer, 2009). It can be argued that, in an attempt to put an embarrassing situation in the best light, gelotophilia implies having a positive outlook when anticipating a potentially harmful situation. One might think of people who actively seek potential situations in which others can make fun of [and with] them, and they find it joyful. For example, we can find individuals who share films through social media channels in which they videotaped themselves in shameful situations, making sure that the audience can watch and share their links (as reported in Ruch & Proyer, 2009). In an endeavor to make others have fun, these individuals anticipate possible damages to themselves (e.g., "I will be the target of mockery"). In this case, when gelotophiles envision shame-related situations, their anticipation of potential detrimental consequences may act as a protective mechanism at the time they decide to behave in such a way. This leads to the idea that gelotophilia might underpin a virtuous element that lends meaning to individuals' behaviors, and this element has to do with future forecasting. Because expecting a happier future situation helps to find purpose in one's actions, it can be argued that individuals' behaviors are an instrumental tool for finding meaning in life (van Tilburg & Igou, 2019). Indeed, our results indicated a significant effect of gelotophilia on happiness only when the virtuous element (humorous outlook) was taken into account.

In light of the results reported in Article 3, positive life expectancies can be understood as a result of being happy and being capable of understanding and

dealing with emotions. Because the person-centered approach was employed, this result put forward an empirical way to measure optimism as a combination of certain personal characteristics. This is a largely understudied approach, yet has important implications for the promotion of happiness. Psychosocial interventions can focus on enhancing happiness, mood repair and overall EI (many positive interventions for this purpose exist, as elaborated on in the introduction) in efforts to provide tools aimed at promoting future thinking. As an example of the benefits stemming from future thinking, goal attainment contributes by "just" setting goal intentions, since establishing a purpose and thinking about the process to accomplish it has been linked to positive-related behaviors (Orbell & Sheeran, 2000).

More specifically, based on the results emerging from Articles 2 and 4, it can be deduced that there is an opposite pattern between expecting the good and expecting the bad. On the one hand, expecting the good, accounted for by engaging in humorous outlooks and by not foreseeing that happiness might lead to bad things in life, is related to enhanced happiness. On the other hand, expecting the bad, accounted for by anticipating being the object of mockery in social interactions and by foreseeing that happiness might bring misfortune, does the opposite. Negative expectancies about the detrimental consequences of happiness can further play a role in mental health, not only because these beliefs contribute negatively to happiness, but also because they entail a higher risk of depression. In a study that sought to assess how depressed, anxious and non-clinical people predicted positive and negative future events, MacLeod et al. found that depressed participants differed from the other two groups in that they anticipated fewer positive experiences, but not more negative ones (MacLeod & Byrne, 1996; MacLeod & Salaminiou, 2001). This finding might help to explain why people rating higher in depression measures were more susceptible to the benefits of pursuing happiness. It may be safe to say that, when it comes to establishing future plans, some people may have thought barriers that prevent them from engaging in positive future thinking. Put differently, the fact of generating less positive future thinking may be involved in the promotion of fear of happiness beliefs.

A life of happiness is wished for by [most] people. In an attempt to pursue this goal, individuals accordingly shape their behavior by means of self-regulatory behavioral mechanisms (Larsen & Prizmic, 2004). This can be taken to mean that people try to maximize their sense of happiness by engaging in behaviors that are thought to facilitate happiness. Indeed, forecasting a happier future gives meaning to everyday behaviors that are considered to promote happiness (van Tilburg & Igou,

2011, 2017). A recent study has found that viewing a brighter, happier future serves as a tool to find meaning in life (van Tilburg & Igou, 2019). Positive expectancies instill people's lives with meaningful behaviors in efforts to attain a sense of purpose in life. Research has consistently suggested that people generally have an optimistic overview of their future, which often becomes biased, presumably due to cognitive processes (Wilson & Gilbert, 2003). By contrast, depressed individuals tend to overestimate the probability of future negative events (MacLeod & Byrne, 1996). Of particular relevance to this thesis is the fact that predictions about one's future affective states (e.g., happiness) are also commonly incorrect and inaccurate (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). Be that as it may, those who envision the pursuit of happiness as a source of misfortune are prone to displaying dampening strategies that dispel the effect of positive emotions, with damaging consequences for their mental health, probably due to detaching themselves from happiness-boosting activities (Article 4).

The results of this thesis are in agreement with the notion that expecting good things to happen in life, in opposition to anticipating bad life circumstances, is an effective, relevant strategy to promote happiness. For example, mental simulations of the future (i.e., imagining how a specific personal situation will unfold) has much to offer to emotion regulation (Taylor & Schneider, 1989). As it is, mental simulations may be beneficial in that they serve as a means of distracting one's focus on troublesome present circumstances (e.g., simulating that the divorce process in which one is currently involved will end up successfully); however, this sense of relief provided by mental simulation will only evoke momentary gains (e.g., the rehearsal effect of thinking about a happy end may dissipate over time) (Brown, MacLeod, Tata, & Goddard, 2002; Oettingen & Mayer, 2002; Szpunar, 2010). In his thorough review about future thinking, Szpunar (2010) elaborated on the functional benefits of mental simulations of past and future personal episodes. He outlined that simulating alternative versions of past events renders new chances to learn from past errors, promotes goal-directed behaviors, and adds meaning to traumatic or negative life events (Kahneman & Miller, 1986; Taylor & Schneider, 1989).

Considering this evidence, the ability to contemplate future scenarios might facilitate the envisioning of potential future difficulties, thus bringing the possibility of planning behavior in consonance and choosing the most appropriate course of action (Taylor & Schneider, 1989). Additionally, future mental simulation promotes behavior coordination in diverse contexts (Szpunar, 2010). Take, for example, the case of a PhD student who is struggling to finish a thesis who, in the course of her or his

investigation, is capable of envisioning the [likely] high state of arousal, self-insecurity or even anxiety that she or he might feel on the day of its defense. By that time, the student may have had the chance to reduce the occurrence of the problem by coming up with different strategies to deal with such a situation. Imagining future hypothetical situations not only helps to prepare the organism for a specific behavior, but it also spurs motivation towards goal accomplishment (Szpunar, 2010). The avenue of research connecting past memories and future plan-guided behavior has been discussed in previous points (see section *7.2.1*).

People need to find, maintain and [if lost] regain meaning in their lives. To do so, they perceive the world according to a framework of expected relations that organizes their perception and interpretation of the world (Heine, Proulx, & Vohs, 2006). When world incongruities or new unexpected events are encountered, this framework is likely to adapt so as to reinterpret the reality. However, on some occasions these incongruities between what is expected and what is experienced can disturb future predictions (van Tilburg & Igou, 2019). In this sense, the establishment of goals is commonly aligned with individual characteristics. For instance, behaviors aimed at imbuing life with meaning usually reinforce one's current worldview and personal values (Heine et al., 2006). Furthermore, people typically seek to experience emotions that confirm their current affective state regardless of whether it is positive or negative (Tamir, 2016). However, the process of setting expectancies can be influenced by certain factors, such as personality (van Tilburg & Igou, 2019). People with neurotic traits are more inclined to expect more negative emotional responses, whereas people with extravert traits tend to expect more positive emotional responses (Hoerger & Quirk, 2010). How people respond to positive emotions has been associated with the development of psychological symptoms, with research suggesting that dysfunctional functioning in responding to positive emotions is linked to depression (Beblo et al., 2012; Raes et al., 2012).

Individual differences in personality are an important factor that influences the way people decide to rule their lives, which subsequently gives rise to every individual's particular experience of happiness (McCrae & Costa, 1991; Tkach & Lyubomirsky, 2006). Research concerning the association between happiness and personality has clearly pointed to extraversion and neuroticism as the more salient traits in this association (Costa & McCrae, 1980), suggesting that personality has an instrumental relationship with happiness. The cognitive mechanisms whereby individuals pursue happiness play a role in the link between personality and happiness. In this sense, Pollock, Noser, Holden, and Zeigler-Hill (2016) noted that

the association between extraversion and happiness was mainly mediated by cognitive strategies directed at capitalizing meaning in life. This suggests that certain mechanisms by which people seek happiness are more connected with the ultimate experience of happiness, and a mechanism that has proved to do so is that of looking for a sense of coherence and meaning in life (Pollock et al., 2016; Vella-Brodrick, Park, & Peterson, 2009).

Besides individual personality predispositions, a hopeful belief of a happier future could also depend on the experience of the current affective state. If goals are meant to spark and adjust people's behaviors, maladaptive or unhealthy goals can lead to maladaptive or unhealthy behaviors (Tamir et al., 2015). For instance, depression entails a feeling of being stuck in life, characterized by repetitive thoughts about the causes and consequences of depression (rumination; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008) and by a tendency for emotional states to be resistant to change (emotional inertia: Kuppens, Allen, & Sheeber, 2010). Depressed people tend to be more inclined to experience feelings of sadness compared to healthy individuals (Tamir et al., 2015). Accordingly, they generally have a negative outlook on their future, which becomes difficult to modify. Their goals therefore become aligned with their [maladaptive] worldview. As a result of this psychological maladjustment, inertia leads to forecasting a hopeless future, probably because depressed people base their predictions on their current affective state (Marroquín & Nolen-Hoeksema, 2015). In contrast, people who do not feel stuck in life but are instead experiencing current emotional distress or dissatisfaction have the tendency to envision a brighter future (Busseri et al., 2009). This could be explained in terms of motivational processes; in order to seek possible alternatives to the current situation, dissatisfied people might feel more motivated to picture brighter expectancies as a way to regain meaning. Unlike depression disorder, in which rumination and emotional inertia make it complicated to envision a brighter future, emotional discomfort may trigger motivational mechanisms that activate the establishment of meaningful goals in the search for alternatives to the unpleasant present. Indeed, in Article 2 we found that people who attempted to correct others' wrongdoings reported diminished happiness, probably as a sign of dissatisfaction with the situation they were trying to change.

Overall, these findings provide an exciting opportunity for practitioners to promote different actions. Cognitive therapy has established that malfunctions in information processing may trigger dysfunctions in affective, motivational and behavioral systems (Beck & Haigh, 2014). Strategies such as cognitive reconstruction,

which aim to develop alternative explanations for inaccurate life explanations, reported promising results in cognitive (Wright et al., 2017) and clinical therapy (Eagleson et al., 2016). Positive imagery may repair pessimistic outlooks and subsequently trigger the benefits of optimism (Eagleson et al., 2016). Other strategies like broad-minded affective coping (Tarrier, 2010), which encourages the recall of positive experiences to evoke positive emotions, and savoring strategies, which aim to maintain pleasure, are seen as sources of clinical utility (Fredrickson, 2001; Szczygieł & Mikolajczak, 2017). The results of a meta-analysis reporting the effectiveness of positive interventions in reducing symptomatology (Bolier et al., 2013; Sin & Lyubomirsky, 2009) encourage the idea that optimism may help to track the evolution of symptomatology in therapy, reduce discomfort and boost well-being.

An indirect practical implication, but worth considering in the field of public policy, is the recent analysis of the effects stemming from appraised loss of future happiness. A risk indicator has recently been developed to assess the "loss of life happiness expectancy" due to psychological distress (Murakami, Tsubokura, Ono, & Maeda, 2018). Rooted in the notion that people's life goal is the maximization of anticipated happiness (Veenhoven, 1996), this indicator evaluates declines in emotional happiness as result of possible indirect effects of psychological distress. Put differently, this risk indicator ascertains to what extent psychological distress-related factors beyond physical or environmental factors – can be detrimental to happiness. The implications of the current findings may be relevant across the lifespan because, according to a recent study, future expectancies in adolescence are a key predictor of fluctuations in the levels of happiness (González-Carrasco, Casas, Viñas, et al., 2017).

8 | CONCLUSIONS

8.1. Final bullets

- Being dissatisfied with one's life can attenuate happiness, while being satisfied does not necessarily contribute to happiness or to positive future expectancy.
- People with a greater predisposition to depression are more likely to see happiness as undesirable and preventable, while people with a greater tendency towards happiness are more likely to see it as a source of benefit.
- The mechanisms involved in processing emotional information have a significant influence on happiness. More specifically, the mechanisms responsible for attending to and regulating affective information are deemed key to enhancing it. While mood attention can be detrimental if not handled properly, mood repair upwardly contributes to happiness. Notably, an appropriate mid-point level of mood attention is required when it comes to boosting happiness.
- Future envisioning plays a significant role in the promotion of happiness: positive, adaptive expectancies about the future contribute to building a relatively long-term psychological condition that accounts for the overall emotional state of the person. Negative, fearful life expectancies appear as factors that impede happiness.
- Expecting good things to happen in life, in opposition to anticipating bad life circumstances, is an effective, relevant strategy to promote happiness
- A connection between the mechanisms involved in evaluating past life judgments and expecting future life circumstances might be considered as a mechanism that influences happiness. The way people deal with the act of thinking about past positive or negative events has an undeniable effect on the sense of present happiness. Accepting and embracing one's life trajectory may help to build immediate happiness, which relates to more positive, happier forecasting.
- The combination of findings provides some support for the conceptual premise that EI, optimism, humor and depression account for important elements in the explanation of happiness due to their unique effects on happiness.
- The need for a substantive, overarching model of subjective well-being hinders a comprehensive understanding of research focusing on the study

of well-being-related measures, such as happiness. Therefore, future research is required to ensure advancement in the study of happiness.

8.2. Future avenues of research

Although the major objective of this thesis concerned the study of certain happiness correlates that needed further investigation, either because inconclusive results had previously been reported or because they were unexplored areas, the present findings have important implications that connect directly with the structure of subjective well-being. Currently, there is consensus among social scientists that providing a scientific definition of well-being is one of the main concerns and, at the same time, one of the more challenging tasks in current research (Dodge et al., 2012; Gilbert, 2006). As presented in the introduction, numerous research traditions have tried to identify the key components of subjective well-being in an attempt to operationalize it. However, the existing accounts fail to resolve the problematic lack of agreement on the definition of this term; if scholars agree on anything, it is the challenge that the terminology poses (Kesebir, 2018).

It has become abundantly clear that well-being is commonly used as a broad umbrella term that refers to the many different ways of evaluating subjective [and objective] life experiences. However, considering the large body of research, happiness could be defined as a relatively long-term psychological condition that accounts for the overall emotional state of individuals. This is the concept of happiness that this thesis has been concerned with. Happiness is therefore the cornerstone of the four articles. Accordingly, this dissertation has contributed to the field of happiness from four different perspectives that could be taken as indicators of the different roles that happiness plays. One of the issues that emerges from these findings is that happiness is an important component in the explanation of subjective well-being due to its unique effect on EI, happiness, humor and depression. Although there are similarities in the measurement of life satisfaction and happiness, since both account for indicators of subjective well-being, our findings support the notion that life satisfaction and happiness has unique different effects on the studied variables. Hence, regarding the different roles of happiness and life satisfaction, the results of this investigation add more evidence to the literature on the structure of well-being. Life satisfaction judgments, defined as a cognitive component of subjective well-being, require one to think about the course of one's life; therefore, conformity and disconformity evaluations stem from the events

towards which individuals orient more attention. As a result, the influence of such evaluations builds on the way people recall and interpret moments of their lives. Happiness, considered the psychological condition of one's overall affective state, may reflect the down-stream effects of life satisfaction. Unlike life dissatisfaction, considerations of life satisfaction did not exert the same influence on future orientation [as did happiness]. Rather, emotional abilities appeared to be more determining in future orientation. This may suggest that life satisfaction and happiness have an effect on different dimensions, and further research should explore how each measure accounts for a general sense of subjective well-being. Examining the hierarchical position of different well-being components and seeing how they relate to each other may be a precondition of providing a rounded account of this construct.

Bottom-up theories are based on the premise that overall well-being is the result of a weighted average of satisfaction with different domains. Individuals subjectively evaluate their satisfaction with family, work, health or leisure (among others), and then aggregate them to formulate a deliberation of their life as a whole (Diener, 1984). By contrast, top-down theories assume that a global tendency of whether individuals perceive their lives in a more positive or more negative way will influence their satisfaction with specific domains (Casas, 1997). Although top-down processes may be responsible for the cognitive and affective biases produced when making overall judgments, research suggests that both bottom-up and top-down processes have explanatory value for subjective well-being (Diener, Lucas, & Oishi, 2018). Further research on the current topic may endeavor to elucidate how these processes combine and explain the role of subjective well-being components. Nevertheless, this is a complex issue for future work since "empirical investigations intended to provide direct tests of bottom-up versus top-down theories face difficult chicken-and-egg issues, that is, difficult issues in sorting out time sequences" (Headey, 2014, p. 424).

Over the past decade, most research into subjective well-being has relied on the tripartite model of mental health as an integration of SWB, PWB and SoWB in a single construct (Keyes, 2002, 2009, 2013). To date, although extensive research has corroborated the tripartite structure of mental health (e.g., Joshanloo et al., 2013; Rogoza et al., 2018), several measurement issues and theoretical disagreements about its conceptualization still exist. The selection of factors or the methods of analysis have varied across research, with some studies focusing exclusively on just one of the components, or differing in the questionnaires used. Other limitations

refer to the sample nature and the cautious generalizability of the findings. But the biggest limitation stems from the multidimensional nature of the construct. As a result, it becomes difficult to unify the existing models "into a hierarchical structure that is a parsimonious and comprehensive conceptualization of the various layers of flourishing mental health" (Gallagher, Lopez, & Preacher, 2009, p. 1029).

One major theoretical issue that has recently dominated the field is the distinction between the elements of mental well-being (i.e., hedonism and eudaimonia; or SWB, PWB and SoWB). Some authors found that the three components of mental well-being were correlated even after introducing methodological approaches to avoid inflated correlations – that is, SWB, PWB and SoWB presented some cross-loadings within the tripartite model. For example, the PWB elements of environmental mastery, self-acceptance and positive relationships showed a tendency to load on SWB (Joshanloo, 2016b, 2017, 2018). Social integration and social contribution, both elements of SoWB, also appeared as defining elements within PWB (Joshanloo, 2016b, 2017, 2018). As a significant contribution, the present results indicate that hedonic evaluations also include eudaimonic elements of human thriving. Additionally, while some scholars have claimed that social relationships are a central component of subjective well-being (Ryff, 2014), others have affirmed that they are predictors of subjective well-being (Waterman, 2008). Thus, differences in the conceptualization of this construct and the different instruments designed to measure it should be carefully considered. Further studies, which take these variables into account, will need to be conducted.

Employing a more comprehensive approach to its measurement would help to identify specific subjective well-being in a more precise way. This is an important issue for future research. Although this thesis applied different methodological techniques, such as SEM, bifactor analysis or the person-centered approach, emerging powerful approaches can offer potential advantages in psychometric assessments. For example, Exploratory Graph Analysis (EGA; Golino & Epskamp, 2017) pertains to the growing realm of network psychometrics. EGA identifies the most convenient structure of multidimensional constructs. Besides, it provides a visual-friendly, easily interpretable plot that displays the number of factors clustered by each item and their levels of relationship. EGA has shown superior results compared to more traditional psychometric approaches (e.g., exploratory factor analysis [EFA], cluster analysis, parallel analysis), and has proved to be a highly reliable technique to assess the dimensionality of psychological constructs (Golino & Demetriou, 2017; Keith, Caemmerer, & Reynolds, 2016). One of the main advantages of EGA is that it

estimates the most appropriate structure of the construct (i.e., number of factors) and simultaneously verifies the structure. In other words, EGA runs EFA and CFA at once. Its extension, Bootstrap EGA (bootEGA; Christensen & Golino, 2019), provides a refined examination of the stability of EGA's identification of factors; hence, the likelihood of inconclusive results regarding the number and content of factors becomes reduced, and more accurate generalizations can be made. Practical guidelines and tutorials are available for applied researchers to use both EGA (Golino et al., 2018) and bootEGA (Christensen & Golino, 2019) techniques in R. As these techniques are in their initial stages, the measurement of subjective well-being will certainly benefit from including network psychometrics to identify the components of this multidimensional construct.

Another recent psychometric approach is ESEM (Asparouhov & Muthén, 2009), which is a promising alternative to more restrictive approaches like CFA. Like EGA, ESEM also integrates EFA and CFA simultaneously. The main difference between ESEM and CFA lies in the assumption that ESEM allows cross-loadings (i.e., items can load on more than one factor), while CFA does not. ESEM has been applied to the measurement of mental well-being (Joshanloo, 2016a; Joshanloo & Lamers, 2016; Rogoza et al., 2018), demonstrating that this approach is preferred over more traditional techniques (e.g., EFA, CFA) to describe psychological constructs. Future research should therefore concentrate on the investigation of emerging measurement approaches applied to this realm.

Two proposed models can offer potential nuance in terms of measuring the underlying structure of subjective well-being and may be considered as examples to guide future research. First, recent developments have proposed an interdisciplinary model to capture the dynamic interplay of positive and negative states of mental well-being (Sirgy, 2019). The proposal of a hierarchical model that integrates physiological, emotional, cognitive, social and developmental aspects of well-being, which was presented in the introduction, may well guide future research and public policy. Second, in an investigation of child well-being, Minkkinen (2013) proposed a holistic structural model to conceptualize the different components of child well-being. Grounded on WHO's definition of health, Bronfenbrenner's bioecological theory, Cobb's social support theory and Vygotsky's socio-cultural approach to human development, that study suggested that the central elements defining individual well-being were mental well-being, SoWB, physical well-being and material well-being. These elements had interplay with other elements considered interpersonal and social processes. Minkkinen's study could serve as a reference

point to start building a more comprehensive model of mental well-being in which subjective and objective elements are included, according to more holistic theories of QOL. In sum, these studies will serve as a basis for future research interested in identifying the underlying structure of subjective well-being, building on the various components and concepts that this thesis has put forward.

8.3. Limitations

Considering that this thesis has brought together four main lines of inquiry within the realm of happiness to widen the advance in its study, a number of important limitations need to be acknowledged. First, the sampling procedure was probabilistic in the four papers, which precludes generalization of the results. The samples sizes were rather small given the correlational nature of the study. Moreover, the nature of the samples was generally imbalanced in terms of gender composition. Gender differences might be influenced by factors such as personality, social context and gender roles (Lucas & Gohm, 2000). More specifically, gender seems to be related to EI (Mikolajczak et al. 2007). Additionally, the use of undergraduate students remains one of the current limitations in research. According to Cummins (2003), this cohort may not clearly represent the general population. Although in one article this limitation was partially overcome by including a group of employees, one must be cautious when interpreting the results. The cultural background of the sample may raise concerns because happiness is influenced by culture (Diener, Oishi, & Ryan, 2013). Further research should expand on our findings by recruiting larger and more representative samples to allow for robust conclusions. Second, the cross-sectional design of the four articles does not allow the temporal stability of the measures to be evaluated or conclusions to be drawn about causality. Third, our studies were mono-methodological as they were solely based on self-report data. Future experimental and longitudinal works are needed to examine the causality of the association between the studied variables. It would be interesting to apply new techniques and more sophisticated statistical procedures, such as those mentioned in the previous section, to refine the knowledge presented here. An arguable weakness of this thesis is the use of only one measure to assess happiness in all the papers. Despite ensuring overall consistency across the four studies, future avenues of research should certainly include more than one measure to assess the same construct. The integration of complementary data from different approaches (i.e., experiential

measures) would therefore allow a more in-depth examination of the dynamics of happiness and increase the generalizability of the results.

All these issues have the potential to limit the generalization of our results, which raised many questions in need of further investigation. Accordingly, caution must be applied when interpreting the results of the four papers and the whole thesis. Nevertheless, this investigation would like to offer fresh new insights into what people can do to strive for a better *subjective* life.

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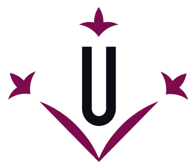

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