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What makes a life meaningful? Folk intuitions about the content and shape of meaningful lives

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ABSTRACT

It is often assumed that most people want their life to be "meaningful". But what exactly does this mean? Though numerous research have documented which factors lead people to experience their life as meaningful and people's theories about the best ways to secure a meaningful life, investigations in people's concept of meaningful life are scarce. In this paper, we investigate the folk concept of a meaningful life by studying people's third-person attribution of meaningfulness. We draw on hypotheses from the philosophical literature, and notably on the work of Susan Wolf (Study 1) and an objection Antti Kauppinen raised against it (Study 2). In Study 1, we find that individuals who are successful, competent, and engaged in valuable and important goals are considered to have more meaningful lives. In Study 2, we find that the perceived meaningfulness of a life does not depend only on its components, but also on how its elements are ordered and how it forms a coherent whole (the "narrative shape" of this life). Additionally, our results stress the importance of morality in participants' assessments of meaningfulness. Overall, our results highlight the fruitfulness of drawing on the philosophical literature to investigate the folk concept of meaningful life.

1. Introduction

1.1. From "meaning of life" to "meaning in life"

What is the meaning of life? Within the philosophical literature, it is customary to distinguish between two different interpretations of this question (King & Hicks, 2021; Martela, 2020; Wolf, 2016):

- The *cosmic* interpretation: under the "meaning of life" interpretation, the question asks about the origins, purpose and goals of human life in general: "are we here for a reason?", "for which purpose have we come to existence?".

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- The *individual* interpretation: under the "meaning *in* life" interpreta-
tion, the question asks "what does it mean for a particular life to be
meaningful?" and "what are people looking for when they strive for
their life to be meaningful?".

Some have argued that both questions can be independently investigated
(King & Hicks, 2021; Metz, 2001). For example, some have defended that
there can be meaning *in* life without meaning *of* life (Martela, 2020), and
thus that the answer to the second question does not depend on the answer
to the first question. However, others have argued that the two meanings
cannot be so neatly separated, and that the meaningfulness of a particular
life should be understood in relation to the meaning of this life in the more
global, cosmic sense (Thomas (2019)). In this paper, we will focus on
the second question (i.e., "what does it mean for an individual life to be
meaningful?"), though we remain neutral on whether the two questions can
be neatly separated and answered isolation. Indeed, our topic of investiga-
tion will be what people mean when they claim that a given, individual life is
meaningful. As we will see, this is a topic that is still mostly unexplored.

In the past decades, psychological investigations of what makes life *feel*
meaningful have flourished. Psychologists have highlighted the importance
of the experience that one's life is meaningful to well-being (King & Hicks,
2021, Schnell 2020), while at the same time emphasizing that the experience
of meaning in life is not predicted by the same factors as other constructs,
such as happiness (Baumeister et al., 2013). Other debates have concerned
the best methods to measure the experience of meaning in life (Costin &
Vignoles, 2020; Steger et al., 2006), its key components (Heintzelman &
King, 2014; Martela & Steger, 2016), and the role of positive affect in the
experience of meaning in life (King et al., 2006; Ryan & Deci, 2001).

Most psychologists working on these agree that experiencing one's life as
meaningful is important for well-being and that most people want to have
a meaningful life. But this raises a question: what do people want when they
search for a meaningful life? What do they mean by that? Or, to put it
otherwise, what is their *concept* of a meaningful life?

1.2. *From the experience of meaning in life to the lay concept of "meaningful life"*

As Leontiev noted (Leontiev, 2013), operationalizing the concept of mean-
ing in life is a task that faces many challenges. Despite these difficulties,
psychologists seem to agree on dividing the experience of meaning in life in
three subconstructs: meaning as purpose, meaning as coherence, meaning
as significance (King & Hicks, 2021; Martela & Steger, 2016).

Meaning as *purpose* took its inspiration from the work of the psychiatrist Viktor Frankl ((1963)) who theorized that the state of meaning arises when people have purposes and clear aims in their life. Depending on researchers, this dimension has been characterized differently, such as having "goals in life and a sense of directedness" (Ryff, 1989, p. 1072), having a "central, self-organizing life aim that organizes and stimulates goals, manages behaviors and provides a sense of meaning" (McKnight & Kashdan, 2009, p. 242) or a "sense of core goals, direction in life, and enthusiasm regarding the future" (George & Park, 2013, p. 371).

Meaning as *coherence (or comprehension)* is often considered as the cognitive component of the experience of meaning in life: it is related to the way our cognitive system manages to make sense of the world, to the appraisal that our life is coherent and understandable and that the variety of our experiences makes sense. Life is coherent in this sense when individuals are able to unify the variety of their experiences into predictable and understandable patterns. Heintzelman and King (2014) find an early trace of this dimension in William James' notion of the "feeling of right direction" (James, 1893) and propose a model they call "meaning as information" according to which the evaluation of our current state of meaning provides us information about how much our environment and experiences are predictable and thus, makes sense to us.

Meaning as *significance* is the most recent construct (Costin & Vignoles, 2020; George & Park, 2017), although this idea can be found in some past research such as terror management theory and the idea of self-esteem defined as "a sense of personal worth in the context of a broader cosmology" (Sullivan et al., 2013, p. 21), or the work of Yalom (1980) on existential psychotherapy. This facet is not restricted to the idea that one's life has value, but also encompasses the idea that what we are doing matters and has some degree of importance. For example, Joske (1974, p. 95) stated that the significance of life is derived from the significance of our activities and that "the significance of an activity may either be intrinsic, coming from the value of a performance in itself, or derivative, stemming from the part which it plays in the achievement of some worthwhile end". This construct is typically measured by items such, "There is nothing special about my existence" or "I am certain that my life is of importance" (Costin & Vignoles, 2020). Such concerns might seem close to what we called the *cosmic* interpretation of meaning of life, suggesting that the experience of meaning in life might in fact integrate such considerations.

However, so far, psychologists have focused on people's *experience* of meaning in life (what we can call *self-perceived meaningfulness*). Indeed, what led them to identify the three constructs of purpose, coherence and mattering as components of meaning in life is that these constructs reliably predicted the extent to which participants perceived or experienced their

own life as meaningful. But people's experience of meaning in life is not the same as their concept of meaningful life (i.e., what they *mean* when they say that a life is meaningful) and components of the former are not necessarily components of the latter. For example, the experience of being successful typically comes with pleasant feelings, such as pride, and such feelings are probably a key component of this experience. However, if we imagine someone who has succeeded but is unaware of their success, we would still say that they are successful, even if they are currently not experiencing any such feelings. Thus, positive feelings such as pride might be a component of the experience of being successful, but they aren't part of the concept of being successful (i.e., what it *means* for a life to be successful). Similar differences might exist for the experience and concept of having a meaningful life.

In fact, people themselves do make the difference between feeling that one's life is meaningful and whether one's life is genuinely meaningful. Recent experimental studies on the lay concept of meaningful life (Prinzing et al., 2021) have shown that people tend to think that meaning in life is not entirely "in the head" and that having a meaningful life is not the same as having the feeling that one's life is meaningful. Thus, analyzing the *experience* that one's life is meaningful is not necessarily the same as analyzing people's *concept* of meaningful life and it is not clear that we can draw on the existing psychological literature about people's experience of meaning in life to conclude anything about people's concept of meaningful life. Though we can expect some of the components of the experience of meaning of life to be shared by the concept, we cannot predict which ones will be.

Not all psychological studies about the meaning of life have focused on the experience of meaning in life, though. A few ones have directly asked participants to describe "their own conceptions of the attributes or char-acteristics of an ideally meaningful life" (Wong, 1998, p. 112). However, the interpretation of these studies is plagued by another confusion between people's *concept* and *conceptions* of a meaningful life. Following Hart (1961), Rawls (1971), and Ennis (2016) draws the distinction between "concepts" and "conceptions" in the following way: "a concept is that to which a term refers as shown by general agreement in a significant and established group of people on similar reported definitions of the term, and a conception is a specific proposal to implement the concept". Thus, "a conception is a proposed plan for achieving the instantiation of the concept to at least some extent." For example, several philosophers might agree to analyze the concept of "happy life" in the following (hedonist) way: a happy life is one that includes more pleasurable than painful experiences. However, they can at the same time disagree on the kind of life that is the most likely to fulfill this criterion: an Epicurean will claim that such

a balance of pleasure and pains will be achieved by a life in which one foregoes most desires to focus on fulfilling the ones that are necessary, while a Cyrenaic (or Plato's Callicles) will advise to fulfill as many desires as possible. In such a case, these philosophers will share a same *concept* of what it means for a life to be happy, while they will have different *conceptions* of the kind of life which is the most likely to constitute an instantiation of this concept. Kauppinen (2012) makes the same distinction in the context of philosophical debates about the meaningful life by distinguishing two questions: "what we are saying of a life when we say it is meaningful" (asking about the *concept*) and "what makes a life meaningful" (asking about *conceptions*).

Thus, asking participants to describe what a meaningful life should look like can lead them to describe their *conceptions* of a meaningful life (i.e., what they take to be the best ways to achieve a meaningful life) rather than their *concept* of a meaningful life (i.e., what they take the basic dimensions according to which a life should be assessed to determine whether it is meaningful; see, Kneer & Haybron, 2019 for a similar methodological issue in the context of the study of the folk concept of happiness). For example, in the aforementioned study in which participants were asked to describe an ideally meaningful life, some participants gave answers such as "being well-educated" or "having a good family". However, it would be strange to think that these are parts of people's concept of a meaningful life, and that people would refuse to consider that one can have a meaningful life if one has no family left and is not well-educated. Rather, such answers probably reflect people's beliefs about the optimal conditions to secure a meaningful life, that is: their *conceptions* of a meaningful life. But since this confusion between folk concepts and theories of the meaningful life plague most of psychological studies about people's definitions of the meaningful life (Schnell, 2009, 2011; Wong, 1998), it would be unwise to only draw on them to determine everyday people's concept of meaningful life.

One way to alleviate these issues and to probe people's concept of a meaningful life might simply be to study how participants attribute meaningfulness to others' people life – a simple method that has rarely been used in this literature (see, Prinzing et al., 2021 for a similar reasoning). By asking participants to decide whether a given life fulfills the condition to instantiate the concept of "meaningful life", this method is less likely to conflate the concept and conceptions of "meaningful life".

Moreover, using this method allows us to draw on a rich philosophical literature that has been trying to analyze the concept of meaningful life based on our intuitive responses to third-person cases. Indeed, while psychologists were busy studying the nature and source of the experience that one's life is meaningful, philosophers have been focusing on determining

what people are actually aiming at when they claim that they want their life to be meaningful. In the following section, we detail two theoretical proposals we used as a starting point for our investigations.

1.3. Philosophical accounts of the meaningful life

1.3.1. Susan Wolf on the concept of a meaningful life

Susan Wolf (2016, 2010) developed an analysis of the everyday concept of "meaningful life" based on what she calls the 'endoxic' method, which consists in starting the philosophical investigation from the point of view of what is accepted by everyone, most people and the wise. As she notes, talk of "meaningful life" is pervasive in newspapers, magazines, and self-development books. According to Wolf, two main categories of commonplace beliefs about what makes life meaningful can be extracted from this material: while some people are advocating to find something you truly love, others call to strive for something greater than yourself.

The first category of beliefs focuses on the *subjective* component of the meaningful life. When someone judges a specific event or activity as *meaningful*, there is generally the idea that it is emotionally satisfying, rewarding, and/or fulfilling, while an absence of meaning involves a feeling of emptiness and dissatisfaction. Thus, talking about a meaningful life seems to imply the presence and/or absence of certain psychological states: "If we focus on the agent's, or the subject's, perspective – on a person wanting meaning in her life, her feeling the need for more meaning – we might incline toward a subjective interpretation of the feature being sought" (Wolf, 2016, p. 115).

However, the second category of beliefs points to more *objective* components. Indeed, when we attribute meaning to activity, events, or to lives, there is also a normative component. If we are asked to think about an individual whose life is meaningful, what comes to our mind are often paradigmatic figures of excellence or achievement (someone who has attained intellectual, sportive, or artistic achievement or contributed to moral and politic causes). Such evaluations are not judgments about a person's affective states and inner life but attributions of values. Thus, when we assess the extent to which a life is meaningful, we go beyond how it feels to the subject of this life to take into account other considerations, such as the importance of what this person achieved.

For Wolf, a proper account of what it means for life to be meaningful should integrate both aspects: a meaningful life must be emotionally fulfilling (the subjective component) *and* make a valuable contribution (the objective component).

Wolf illustrates her position through a series of fictional cases highlighting the different ways in which a life can lack meaning (Wolf, 2016). The first one is named the *Blob*, who is a "person whose life is lived in hazy passivity, a life lived at a not unpleasant level of consciousness, but unconnected to anyone or anything, going nowhere, achieving nothing", such as "a person who spends day after day, or night after night, in front of a television set, drinking beer and watching situation comedies" (Wolf, 2016, p. 116). Wolf contrasts this passivity with the case of the *Useless*: an idle rich "who flits about, fighting off boredom, moving from one amusement to another", and whose life is also meaningless. Indeed, while the Blob is passive, the Useless is active, but this activity is pointless or useless, as it achieves nothing important or valuable.[1]

Finally, to show that what makes a life meaningful is the importance of what this life really achieved and not just the importance of the goal it is aiming at, Wolf considers a third case of not-so-meaningful life, which she calls the *Bankrupt* – the story of a scientist who dedicates most of her time to research, and "whose life's work is rendered useless by the announcement of a medical breakthrough just weeks before his own research would have yielded the same results" (Wolf, 2016, p. 117).

Wolf (2010) summarizes her account of what it means for life to be meaningful with the following list of criteria:

- Two subjective criteria: (i) being actively engaged in an activity, and (ii) loving and being fulfilled by this activity.
- Two objective criteria: (iii) being engaged in activities the goal of which is important and positively valuable, and (iv) being somewhat successful in and consequently good at these activities, which implies having been involved in them for some time.

Interestingly, this account of what it means for life to be meaningful resonates with the *purpose* and *significance* dimensions highlighted in the psychological literature. Being engaged in important and successful activities that make an impact on the world make our lives *significant*, while being engaged in activities that one loves and is fulfilled by is not so far from having a *sense of purpose*.

1.3.2. Kauppinen on the shape of a meaningful life

In his article on "Meaningfulness and Time", Kauppinen (2012) puts forward a fitting-attitude analysis of what it means for a life to be meaningful. According to him, a meaningful life is a life for which it is appropriate to experience "pride, joy, a kind of hope, self-esteem, even elevation on the part of the agent, and admiration and inspiration on the part of others" (353). However, our interest with Kauppinen's proposal is not with his analysis of

the concept of meaningful life,[2] but with a certain objection he raises against what he calls the "New Standard View" of what it means for a life to be meaningful – that is: accounts, including Wolf's, according to which a meaningful life is a combination of subjective endorsement and actions directed at objective values.

According to Kauppinen, the problem with the New Standard View is that "even though it gets much right about meaningfulness, it doesn't get *life* quite right" (357). More precisely, Kauppinen argues that the New Standard View cannot account for the fact that, when assessing the meaningfulness of a life, we take also take into account its *temporal dynamics*.

Indeed Kauppinen stresses the fact that, when estimating the meaningfulness of one's life, we do not focus only on the individual component (episodes) of this life, but also look at how these individual components are organized and connect to each other to form the "narrative shape of this life".[3] For Kauppinen, a meaningful life must be able to be told under the form of a coherent story and have a specific narrative shape – in other words, a meaningful life must be coherent, where Kauppinen defines a coherent life in such a way that

> a life is the more Coherent the more that later activities are positively informed by earlier activities with respect to goal-setting (the agent's goals are more valuable than they would otherwise be), goal-seeking (the agent exercises her capacities more effectively and/or is more irreplaceable), and/or goal reaching (the agent is more successful; Kauppinen, 2012, p. 368)

This clearly echoes the coherence dimension highlighted by the psychological literature, according to which the experience that one's life is meaningful depends on one's ability to discern understandable patterns in one's life that makes it comprehensible, though Kauppinen's narrative approach at defining coherence is only one possible way of operationalizing this concept.

Kauppinen's point also echoes discussions about hedonist approaches to well-being. While some have claimed that "the intrinsic value of a life is equal to the sum of the intrinsic values of the minimal episodes of intrinsic attitudinal pleasure and pain contained in the life" (Feldman, 2004, p. 129), other have claimed that the order in which pleasures and pain occur within one's life should also be taken into account (Kahneman, (2000)). For example, Brentano (1973, p. 196) defended the idea of *bonum progressionis* – that well-being over a period of time is not just a function of local benefits, but depends also on the trajectory: "let us think of a process which goes from good to bad or from a great good to a lesser good; then compare it to one which goes in the opposite direction. The latter shows itself as the one to be preferred." (Brentano, 1973, p. 196).

Kauppinen's claim is that a similar point can be made about meaningfulness. The idea that "life is ideally meaningful when challenging efforts lead to lasting success" entails that, even when their components are similar, two lives might not be equally meaningful, due to their distinct shape (the order into which these components connect to each other).

To support and exemplify his idea, Kauppinen compares four fictional lives:

- The *Sheer Luck* is born in a lower middle class and doesn't do well at school. He gets a low-salary job but finds by accident a huge amount of money, and spends it to buy a big house and to enjoy city nightlife.
- The *Deterioration* is born with wealth and privileges. He goes to private schools, but he is not interested at all in what is taught, which is not important for him because he made relations with important families. He spends his life partying. One day he loses his income because his father is arrested for being involved in a pyramid scheme. He also loses his so-called friends and ends up working as a janitor.
- The *Hard Worker* is born in the middle class with an alcoholic father. She is not very popular at school but works a lot. She is offered a scholarship for a prep school but has to refuse to take care of her large family. She attends night classes and does so well that she is proposed a job as a laboratory assistant. She surprises a professor with her intelligence and is proposed a job in a research group. Still working hard, she makes a breakthrough discovery. With her new income, she buys a house for her family and her parents. She is known as particularly supportive of students which comes from a poor family.
- The *Noble Failure* is born with wealth and privileges. She goes to the best school and then she graduates at the top of her medical school. She helps to raise money for a charity project and go to Africa to help to build a hospital. When the hospital is destroyed by soldiers, she is too discouraged to pursue her projects. She gets a low-paid job in a clinic that hosts traumatized refugee who constantly reminds her of her failure.

According to Kauppinen, when considering these cases, most of us should have the intuition (i) that these lives are not equally meaningful and (ii) that their meaningfulness can be ranked in the following order: Hard Work > Noble Failure > Sheer Luck > Deterioration. This ranking is supposed to be determined by at least two factors: the efforts invested by the main character, and the overall shape of their life. For example, the *Hard Worker*'s life is supposed to be more meaningful than the *Noble Failure*'s life because, though both put a lot of effort of pursuing their goal,

the *Hard Worker*'s life is following an ascending trajectory leading from effort to success, while the *Noble Failure*'s life is following a descending trajectory.

According to Kauppinen, Wolf's account of what it means for a life to be meaningful, as well as other versions of the New Standard View, cannot account for this ranking. On the contrary, his fitting-attitudes analyses can: we take into account the temporal dynamics of lives when assessing whether it is fit to feel admiration and inspiration toward them. Though his claim that a meaningful life must be coherent is not part of his analysis of the concept of meaningful life, but a claim about what should be according to him a correct *conception* of the meaningful life, it also functions as a possible objection to Wolf's analysis of the concept of meaningful life. Thus, we were interested in investigating his suggestions about the role of narrative shape in third-party judgments about the meaningfulness of lives, to determine whether folk judgments are really sensitive to temporal dynamics, and to which extent this poses a threat to Wolf's analysis.

One thing that worried us about Kauppinen's argument was that his thought experiments did not vary only along the dimensions he wanted to highlight (agent's effort and temporal dynamics). More precisely, we were worried that the perceived morality of the agent might also differ from one of his thought-experiment to the other: while it is made explicit that the *Hard Worker* and *Noble Failure* care about others, the *Sheer Luck* and *Deterioration* are more easily perceived as "selfish pricks". Thus, we tried to control for this potential confound in our study.

1.4. Aims of our studies

In this paper, our aim is not to determine what really makes life meaningful, but to investigate laypeople's concept of a "meaningful life" – that is: what people refer to when they claim that they want a meaningful life. Thus, our aim was not to test for and potentially reject Wolf account of what it means for life to be meaningful or Kauppinen's account of the role of temporal dynamics in our judgments about the meaningfulness of lives. Rather, our idea was to use their accounts as a thread to guide us in the exploration of the lay concept of meaningful life. To the extent that both accounts are grounded in intuitions about particular cases, we can expect them to deliver useful suggestions about the way we think about what it means for a life to be meaningful.

In Study 1, we follow Wolf's analysis of the concept of meaningful life and the four dimensions she highlights to explore laypeople's intuitions on what it means for a life to be meaningful. In Study 2, we follow Kauppinen's suggestions about the role narrative shape and effort plays in our judgments about the meaningfulness of lives.

2. Study 1: The components of a meaningful life

In this study, participants were presented with five vignettes describing different lives inspired from the work of Susan Wolf. Vignettes varied along several dimensions: (i) how engaged the main character was in some activity, (ii) how much fulfillment they drew from their life, (iii) how important was their main activity, and (iv) whether their activity was successful.

We hypothesized that:

- (H1) attributions of meaningfulness and happiness would be distinct enough from each other (correlation inferior to $r = 0.5$).
- (H2) participants' attributions of meaningfulness, happiness and perceived meaningfulness (the extent to which the main character perceived their own life as meaningful) would vary across vignettes and that variations in meaningfulness attributions would follow the pattern described by Wolf,
- (H3) attributions of meaningfulness, perceived meaningfulness, and happiness would be predicted by the five following variables: how much mains characters were actively engaged in an activity they like, how fulfilled they were, how much time they invested in their activity, how good they were at this activity, and how important was their activity.

2.1. Participants

Based on the results of a pilot study, we determined that a total of 186 participants was needed to achieve 0.95 power to detect half the smallest difference between vignettes (d = 0.33) with α = 0.05. We aimed for a total of 250 participants and, forecasting for exclusions, decided to recruit a total of 300. Because of the high number of exclusions based on a single attention check, we ended up recruiting a total of 409 participants. Participants were US residents recruited through Prolific Academic and paid £1.25 for their participation. After exclusion, we were left with a total of 303 participants (180 men, 122 women 1 other; M_{age} = 26.33, SD_{age} = 8.2).

2.2. Methods

Participants were presented with five vignettes describing a character's life. Table 1 presents the four dimensions along which our vignettes varied: (i) how engaged the main character was in some *activity*, (ii) how *fulfilling* was this activity to the main character, (iii) how *important* it was, and (iv) whether their activity was *successful*. Dimensions were not systematically varied.

Vignettes. All vignettes existed in two versions: a detailed, *concrete* version, and a shorter, more *abstract* one. *Abstract* vignettes were designed so that they could be used cross-culturally in further studies (contrary to *concrete* vignettes which included more culture-specific examples). Participants were randomly assigned to see all five abstract or all five concrete vignettes. Also, each vignette existed in two versions: one with a female protagonist, and one with a male protagonist. Protagonist's gender was randomly chosen for each vignette.

The *abstract* version of all five vignettes can be found below:

- **(1) The Blob**: is considered as someone nice and clever, but also very lazy. Because his parents left him enough resources to live without the need of working, his only activities for the past ten years have been eating, sleeping, and entertaining himself.
- **(2) The Useless**: is considered as someone nice and clever. His parents left him with enough resources to live without the need of working. Thus, he has spent most of the past ten years having fun and enjoying himself by engaging in a wide array of distracting and exciting activities. He never rests, and never stops to think about what the future holds or what he will be doing the next day.
- **(3A) The Failure**: is considered as someone nice and clever. For the past ten years he has been a medical doctor. His main mission is to make sure people in his community stay healthy, and it is a mission he cares deeply about, above everything else. One day, a deadly disease affects everyone close to him. He tries his best to heal everyone but sadly, there is no real cure for the disease and almost all his community dies from the disease.
- **(3B) The Successful**: (*Same beginning as The Bankrupt. Only last sentence changes.*) He tries his best to heal everyone and, thanks to his skills, succeeds in saving almost everyone's life.
- **(4) The Odd**: is considered as someone nice and clever. Dimitri has one passion in life: he is fascinated by stones. For the past ten years, he has spent all of his free time admiring and collecting them. His main goal is to add the most beautiful and rare stones to his collection, and his stone collection is one of the richest and most complete in the world.

Table 1. Features along which vignettes varied in Study 1.

Features	1 – The Blob	2 – The Useless	3A – The Failure	3B – The Successful	4 – The Odd
Activity	-	+	+	+	+
Fulfilling	-	-	+	+	+
Important	-	-	+	+	-
Success	+	+	-	+	+

Dependent variables. For each vignette, participants were asked the following questions:

- *Meaningfulness*: According to you, to what extent does this person have a meaningful life? (from 1 = 'very meaningless' to 7 = 'very meaningful').
- *Perceived meaningfulness*: According to you, to what extent does this person perceive his life as meaningful? (from 1 = 'very meaningless' to 7 = 'very meaningful').
- *Happiness*: According to you, to what extent does this person have a happy life? (from 1 = 'very unhappy' to 7 = 'very happy').

Manipulation checks. Participants were then asked to rate their agreement with the following statements probing participants' interpretation of each vignette (on a scale from 1 = 'strongly disagree' to 7 = 'strongly agree'):

- *Active*: The character is actively engaged in activities he likes.
- *Fulfilled*: The character finds his activity fulfilling.
- *Skill*: The character is good at what he is doing.
- *Importance*: The character is doing something important.
- *Time investment*: The character has been engaged in such activities for a long time.
- *Plausibility*: I find it plausible that a person like this could exist in real life.

Others. For exploratory purposes, we also asked participants to justify their answers their attribution of meaningfulness, and to fill the Geneva Sentimentality Scale (Cova & Boudesseul, 2020), and a personality scale (Gosling et al., 2003).

2.3. Results

2.3.1. Manipulation checks

Mean and SDs for each variable are presented in Table 2, as well as the results of post-hoc paired Student t-tests (with Bonferroni corrections) comparing each variable across vignettes. The *Active, Fulfilled, Skill* and *Important* manipulation checks were supposed to track our four dimensions of interest (*Activity, Fulfilling, Important, Success*). Overall, the results we obtained matched the expectations described in Table 1. Exceptions included high *Active* scores in the Blob case and high *Fulfilled* scores in the Useless case. However, the relative positive of each vignette (their rank) matched our expectations.

Table 2. Mean, SDs and results of post-hoc paired t-tests for each variable across vignettes in Study 1. Results are presented separately for abstract and concrete versions.

Abstract vignettes						
Variables	1-Blob	2-Useless	3A-Failure	3B-Successful	4-Odd	Rank
Meaningfulness	2.77 (1.56)	4.07 (1.66)	6.29 (1.02)	6.53 (0.81)	5.31 (1.19)	1 < 2 < 4 < 3A < 3B
Self-perceived	3.77 (1.54)	4.96 (1.44)	5.88 (1.19)	6.38 (0.84)	5.71 (1)	1 < 2 < 4 = 3A < 3B
Happiness	4.21 (1.52)	5.64 (1.21)	4.56 (1.42)	5.84 (1.03)	6.03 (0.73)	1 = 3A < 2 = 3B, 2 < 4, 3B = 4
Active	4.87 (1.50)	6.27 (0.88)	6.12 (0.93)	6.24 (0.92)	6.60 (0.60)	1 < 2 = 3A = 3B < 4
Fulfilled	3.92 (1.72)	5.73 (1.30)	6.34 (0.71)	6.40 (0.77)	6.44 (0.77)	1 < 2 < 3A = 3B = 4
Skill	4.38 (1.42)	4.68 (1.06)	5.94 (0.94)	6.61 (0.62)	6.14 (0.91)	1 = 2 < 3A = 4 < 3B
Importance	2.04 (1.24)	3.07 (1.46)	6.72 (0.60)	6.75 (0.57)	4.43 (1.31)	1 < 2 < 4 < 3A = 3B
Time investment	5.73 (1.48)	6.02 (1.07)	6.24 (0.88)	6.28 (0.97)	6.27 (0.94)	1 = 2, 2 = 3A, 1 < 3A = 3B = 3A
Plausibility	5.95 (1.33)	6.01 (1.24)	6.11 (1.05)	5.93 (1.05)	6.03 (1)	
Meaningfulness	2.15 (1.21)	3.08 (1.43)	6.09 (1.07)	6.60 (0.67)	5.31 (1.08)	1 < 2 < 4 < 3A < 3B
Self-perceived	2.73 (1.32)	3.91 (1.37)	5.62 (1.21)	6.39 (0.77)	5.69 (1.01)	1 < 2 < 4 < 3A < 3B
Happiness	2.85 (1.51)	4.38 (1.59)	4.95 (1.18)	5.80 (1.06)	6.10 (0.85)	1 < 2 < 3A < 3B < 4
Active	3.50 (1.78)	5.02 (1.54)	6.12 (0.91)	6.12 (1.06)	6.62 (0.72)	1 < 2 < 3A = 3B < 4
Fulfilled	2.74 (1.64)	4.18 (1.71)	6.11 (0.97)	6.36 (0.87)	6.49 (0.84)	1 < 2 < 3A < 3B = 4
Skill	3.70 (1.57)	4.03 (1.29)	5.68 (1.13)	6.70 (0.64)	6.09 (1.02)	1 = 2 < 3A < 4 < 3B
Importance	1.58 (1.07)	2.41 (1.25)	6.47 (0.83)	6.73 (0.67)	4.35 (1.29)	1 < 2 < 4 < 3A < 3B
Time investment	5.73 (1.53)	5.74 (1.38)	6.41 (0.82)	6.38 (0.87)	6.38 (0.86)	1 = 2 < 3A = 3B = 4
Plausibility	5.53 (1.77)	5.87 (1.54)	6.27 (1.16)	6.22 (1.17)	5.97 (1.26)	

2.3.2. Correlations between meaningfulness and happiness attributions

A Pearson test revealed a r > 0.50 (r = 0.53, p < 0.001, 95% CI [0.50, 0.57]) correlation between meaningfulness and happiness attributions. Thus, though there was a moderate to strong correlations between meaningfulness and happiness attributions, it seems that both measure separate constructs.

Additionally, we also calculated the correlation between *meaningfulness* and *self-perceived meaningfulness* (r = 0.75, p < 0.001, 95% CI [0.73, 0.77]) and between *self-perceived meaningfulness* and *happiness* (r = 0.64, p < 0.001, 95% CI [0.61, 0.67]).

2.3.3. Comparison between vignettes

We conducted three ANOVA, one for each dependent variable (meaningfulness, happiness, perceived meaningfulness) with type of *vignettes* and *version* (abstract vs. concrete) as predictors. For *meaningfulness*, we found a significant main effect of *vignettes* (η_p^2 = 0.63, p < 0.001) and a significant interaction effect (η_p^2 = 0.03, p < 0.001). For *self-perceived meaningfulness*, we found a significant main effect of *vignettes* (η_p^2 = 0.47, p < 0.001) and a significant interaction effect (η_p^2 = 0.038, p < 0.001). For *happiness*, we found a significant main effect of *vignettes* (η_p^2 = 0.35, p < 0.001) and a significant interaction effect (η_p^2 = 0.08, p < 0.001). Overall, all three variables differed across vignettes, but these differences depended on the version (abstract or concrete).

We compared results across vignettes post-hoc paired Student t-tests with Bonferroni correction. Results are presented in Table 2 and Figure 1. The pattern of responses for meaningfulness attributions matches Wolf's predictions: the Successful (3B) is always the most meaningful life while the Blob (1) is always the most meaningless, and the Useless (2) always the second most meaningless. The Failure (3A) is the second most meaningful and is significantly less meaningful than the Successful (3B).

2.3.4. Predictors of life evaluations

To better understand which feature of each vignettes drove participants' intuitions, we performed three regression analysis with participants' answers to the *Active, Fulfilled, Skilled, Importance* and *Time investment* questions as predictors, and meaningfulness, self-perceived meaningfulness and happiness attributions as dependent variables. Results are presented in Table 3.
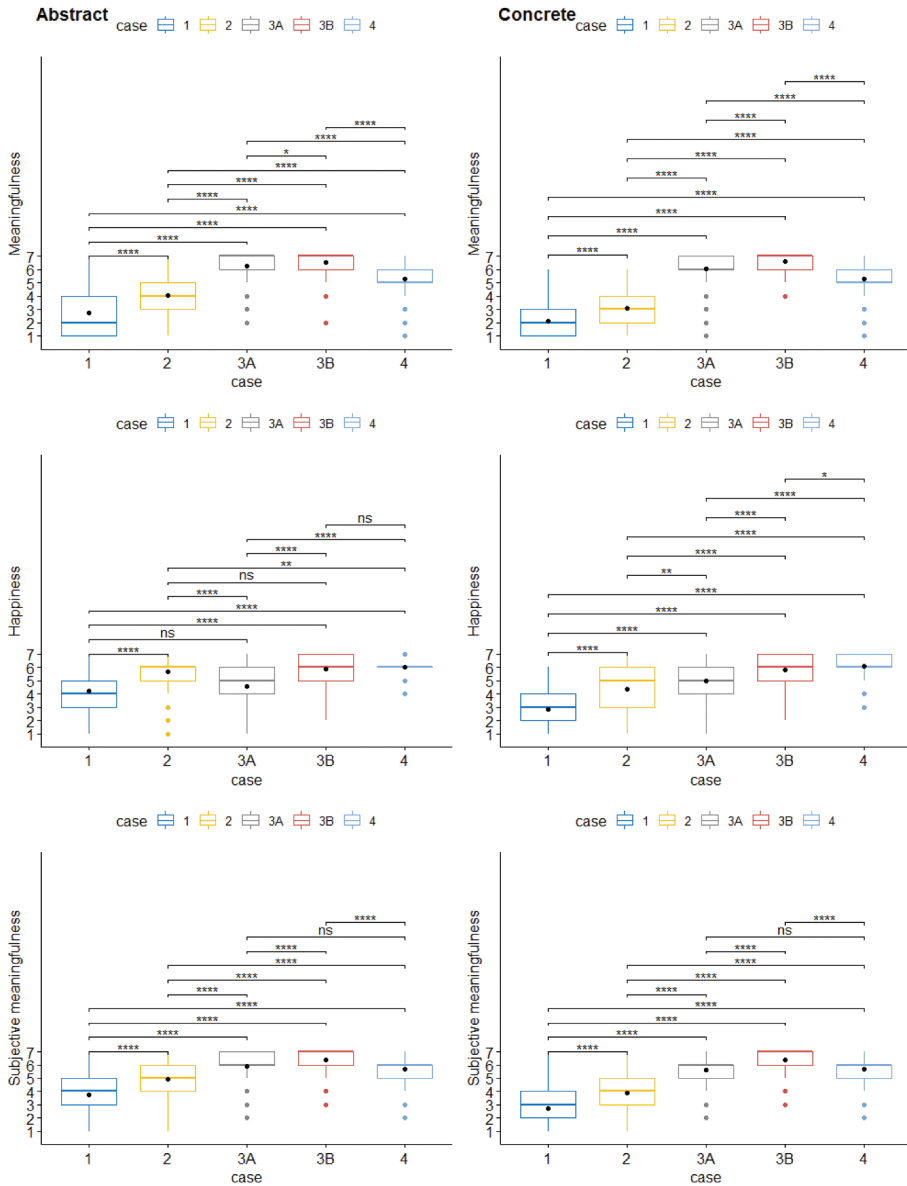
For *meaningfulness* attributions, much of the variance was driven by the importance participants gave to the protagonist's activity (β = 0.63, p < 0.001). Whether the character was fulfilled, successful and engaged in an activity they liked also played a significant, albeit much less important role. The same factors played a role in attributions of *self-perceived meaningfulness*, though the gap between importance and the other factors was smaller.

Attributions of *happiness*, however, were quite different. The importance of the protagonist's activity no longer played a role and the main predictors were whether the protagonist was involved in activities he liked, and whether these activities were fulfilling.

2.4. Conclusion and discussion

Though the correlation between meaningfulness and happiness attributions were not significantly different from $r = 0.50$, they were still low enough for us to conclude that they measure two different constructs. This leads to the question: what drives people to judge a life meaningful?

Figure 1. Participants' meaningfulness, self-perceived meaningfulness and happiness attributions across vignettes, for abstract and concrete versions (Study 1). *: $p < .05$ **: $p < .01$, ***: $p < .001$, ****: $p < .0001$.

To answer this question, we compared meaningfulness attributions for five vignettes inspired from the work of Susan Wolf. For four vignettes, we used an incremental method, introducing one potential component of meaningfulness at a time: compared to the *Blob* case, the *Useless* case introduced being engaged in some activity. Compared to the *Useless*, the

Table 3. Results of three multiple linear regression with *Active, Fulfilled, Skilled, Importance* and *Time Investment* scores as predictors and (a) meaningfulness, (b) self-perceived meaningfulness, and (c) happiness attributions as dependent variables.

Term	Estimate	β	Std error	t value	p value
(a) Meaningfulness attributions					
(Intercept)	0.22	0	0.15	1.46	0.14
Active	0.06	0.04	0.03	2.05	0.04 *
Fulfilled	0.22	0.19	0.03	8.40	< 0.001 ***
Skilled	0.14	0.11	0.02	5.68	< 0.001 ***
Importance	0.56	0.63	0.02	34.52	< 0.001 ***
Time	−0.03	−0.01	0.02	−1.05	0.29
Adjusted R^2 = 0.75, F = 912, $p < 0.001$***					
(b) Self-perceived meaningfulness					
(Intercept)	0.97	0	0.17	5.71	< 0.001***
Active	0.15	0.14	0.03	5.09	< 0.001***
Fulfilled	0.23	0.24	0.03	8.00	< 0.001 ***
Skilled	0.16	0.15	0.03	6.07	< 0.001 ***
Importance	0.26	0.36	0.02	14.84	< 0.001 ***
Time	−0.01	−0.01	0.03	−0.52	0.60
Adjusted R^2 = 0.56, F = 395, $p < 0.001$***					
(c) Happiness					
(Intercept)	1.48	0	0.18	8.06	< 0.001 ***
Active	0.33	0.31	0.03	10.22	< 0.001 ***
Fulfilled	0.29	0.32	0.03	9.43	< 0.001 ***
Skill	0.19	0.19	0.03	6.65	< 0.001 ***
Importance	−0.03	−0.05	0.02	−1.78	0.07
Time	−0.14	−0.10	0.03	−4.82	< 0.001 ***
Adjusted R^2 = 0.44, F = 241.7, $p < 0.001$***					

Failure was engaged in an important activity. And compared to the *Failure*, the *Success* was successful in their activity. The *Odd* was similar to the *Success*, except that the activity was not important.

Overall, our results follow the kind of pattern predicted by Wolf. Participants tended to consider the *Blob* and *Useless*' lives as not meaningful, while they tended to consider the *Success*' life as the most meaningful. However, despite Wolf's doubts about her *Bankrupt* case, participants tended to consider that the *Failure*'s life was meaningful, though less than the *Success*' life. This suggests that success might not be a necessary condition for a life to be meaningful (though it might be a plus). Finally, the fact that most participants considered the *Odd*'s life as meaningful (though less than the *Success*' life) might also seem to contradict Wolf's claim that the meaningful life has to be dedicated to an important cause. However, it turns out that participants' perceptions of importance for the *Odd* were above the midpoint (suggesting that we failed to describe a really unimportant activity). Still the *Odd*'s activity was still considered less important than the *Failure* and *Success*' activities, which might explain why the *Success*' life tended to be considered more meaningful than the *Odd*'s life. In conclusion, the most meaningful life was indeed the one combining activity, fulfillment, success and importance.

Our multiple linear regressions provided further information about the factors driving participants' assessment of meaningfulness. Strikingly, participants' attributions of meaningfulness were mainly driven by the importance of the protagonist's activity. However, though less important, the three other factors mentioned by Susan Wolf (engagement in activity, fulfillment, success) also played a significant role. Together, these four factors were enough to explain 75% of the variance in participants' answers. This suggests that Wolf's analysis does succeed in capturing most of the folk concept of meaningful life.

In comparison, attributions of happiness were not driven by the importance of the protagonist's activity, but more by their internal psychological states (whether they were engaged in an activity they liked and found fulfilling).

Certain limitations should nevertheless be pointed out, such as the fact that abstract and concrete version did not always yield the same results (see for example, the difference between the *Failure* and *Success*' case) and the same interpretation (see attributions of fulfillment in the *Useless* case). Moreover, certain attributions of activity and fulfillment were higher than we expected. This can be due either to how our vignettes are written, or to an acquiescence bias.

3. Study 2: The shape of a meaningful life

In this study, participants were shown four vignettes describing different lives and inspired from Kauppinen's work on the shape of meaningful lives. Vignettes varied along several dimensions: (i) whether the protagonist was moral, (ii) whether the protagonist was a hard worker, and (iii) the general direction of the protagonists' life (ascending, descending, stable low, stable high).

We hypothesized that:

- (H1) attributions of meaningfulness and happiness would be distinct enough from each other (i.e., correlation inferior to $r = 0.70$).
- (H2) participants' attributions of meaningfulness, happiness and enviableness would vary along the three factors systematically manipulated across vignettes (efforts, morality, life direction)
- (H3) attributions of meaningfulness, happiness and enviableness would be predicted by the five following dimensions: how much efforts the protagonist provided, how moral the protagonist was, the protagonist's welfare at the beginning of their life, the protagonist' welfare at the end of their life, and interaction between the last two predictors (beginning*ending).

3.1 Participants

Based on the smallest effect size of interest observed in a pretest, a power analysis revealed that we needed 264 participants to reach a 0.80 power to detect a change of $R^2 = 0.03$ in a multiple regression analysis with $\alpha = .05$. Forecasting exclusions, we recruited 306 United States residents through Amazon Mechanical Turk. They were paid $1 for their participation. 4 were excluded for failing an attention check, leaving us with 302 participants (184 men, 115 women, 3 others; $M_{age} = 37.05$, $SD_{age} = 11.5$).

3.2 Methods

The study took place online and was divided into two parts: a rating one and a ranking one.

3.2.1. First part: Rating vignettes

Each participant had to read four vignettes drawn from a pool of sixteen (see Supplementary Materials). All vignettes described the life of a character and they varied along three different factors:

- *Life direction (LD)*: How the protagonist's welfare evolves between the beginning and the end of their life:

  ++ (comfortable beginning, comfortable ending)
  +- (comfortable beginning, uncomfortable ending)
  -+ (uncomfortable beginning, comfortable ending)
  – (uncomfortable beginning, uncomfortable ending)

- *Morality (M)*: Whether the protagonist is a selfless person (+) or a selfish one (-).
- *Efforts (E)*: Whether the protagonist is a hard-worker (+) or a lazy person (-).

Each vignette was built using a similar structure

- Description of protagonist's welfare at the beginning of their life.
- Whether the protagonist is a hard-worker.
- Description of the protagonist's morality at the beginning of their life.
- Description of protagonist's welfare at the end of their life.
- Description of the protagonist's morality at the end of their life.

Here is an example of vignettes (LD-+, M+, E-):

Imagine the story of Agnes, who started her life from scratch as a result of being born into a poor and uneducated family. Her mother was a housekeeper and her father a dustman **(LD beginning -). As someone very lazy, she never pushed herself out to get a good position (E -).** Also, she is known as someone very kind and always keen to help others **(M+)**. *It turns out Agnes got a very satisfying and comfortable life* **(LD ending +).** Furthermore, everyone thinks she is one of the kindest and selfless people they know **(M +)**.

Parts in italic are those describing life direction, those in bold describe the efforts provided by the protagonists and the underlined ones describe the protagonist's morality.

The design was mixed. Each participant saw each variation of the Life Direction factor (LD++, LD+-, LD-+, LD−), while Morality and Effort were kept constant within each participant. Thus, each participant was presented with four vignettes.

After each vignette, participants had to answer the three following questions on a 7-points Likert scale (from 1 = 'very meaningless/unhappy/unenviable' to 7 = 'very meaningful/happy/enviable'):

- *Meaningfulness*: To what extent does this person have a life that is meaningful?
- *Happiness*: To what extent does this person have a happy life?
- *Enviableness*: To what extent does this person have an enviable life?

They were also asked to rate their agreement with the four following manipulation checks (1 = 'strongly disagree', 7 = 'strongly agree'):

- *Beginning*: The character was born with a good start.
- *Hard worker*: The character is a hard worker.
- *Good person*: The character is a good person.
- *Ending*: The character is able to live comfortably at the end of the story.

3.2.2. Second part: Ranking life's characters

Participants were presented with another group of four vignettes that varied in Life Direction, but in which Morality and Efforts were kept constant. Then, they were asked to rank the four lives described in these vignettes from the most meaningful to the least, and from the happiest to the least.

3.3. Results

3.3.1. Manipulation checks

To determine whether our manipulation was successful, we used ANOVAs with each of our manipulation checks as dependent variable and each of the manipulated factors as factors (the Life Direction factor was broken into two

Table 4. Effect of each factor on each manipulation check, represented by the difference (Δ) in means between the two levels in each factor.

	Beginning	Good person	Hard worker	Ending
Beginning of life factor	Δ = 3.25 ***	Δ = −0,24 **	Δ = −0,44 ***	Δ = 0,33 ***
Morality factor	Δ = 0,14	Δ = 2,72 ***	Δ = 0,7 ***	Δ = 0,47 ***
Effort factor	Δ = 0,06	Δ = 0,35 ***	Δ = 2,3 ***	Δ = 0,15
Ending of life factor	Δ = 0,17	Δ = 0,14	Δ = 0,07	Δ = 2,48 ***

subfactors: Beginning and Ending of life). Results are presented in Table 4. Overall, our manipulation was successful, and factors had their main impact on the expected manipulation checks.

3.3.2. Correlations between meaningfulness and happiness attributions

A Pearson test revealed a $r < 0.70$ ($r = 0.63$, $p < 0.001$, 95% CI [0.60, 0.67]) correlation between meaningfulness and happiness attributions. The correlation was higher than in Study 1 but significantly inferior to $r = 0.70$. Again, it seems that we are dealing with two separate constructs.

Additionally, we computed the correlations between enviableness and meaningfulness ($r = 0.51$, $p < .001$, 95% CI [0.47, 0.55]) and enviableness and happiness ($r = 0.67$, $p < 00.1$, 95% CI [0.64, 0.70]). The former correlation was significantly higher than the latter (Williams test: $t = 8.68$, $p < 0.001$), suggesting that participants saw happiness as more important to enviableness than meaningfulness. To explore this idea, we conducted an unplanned linear regression using enviableness as a dependent variable and meaningfulness and happiness as predictors. Both predictors had a significant effect, but standardized regression coefficient was higher for happiness ($\beta = 0.58$, $p < 0.001$) than for meaningfulness ($\beta = 0.15$, $p < 001$).

3.3.3. Impact of life direction, effort and morality on meaningfulness attributions

We conducted three ANOVAs with Morality and Efforts as between-subject factors and Life Direction as within-subject factor, and (a) meaningfulness, (b) happiness, and (c) enviableness as dependent variables. Results are presented in Table 5.

Our results suggest that Morality has a major effect on attributions of meaningfulness, compared to Life Direction, though both Efforts and Life Direction also had a significant effect. For happiness and enviableness attributions, all three factors also had a significant effect, but Life Direction had the greatest impact.

We then compared meaningfulness, happiness and enviableness attributions across conditions using post-hoc paired t-tests (with Bonferroni correction), the results of which are presented in Figure 2. Overall, results suggest that Life Direction was relevant for meaningfulness attributions

(as well as happiness and enviableness). Life with a bad start and a comfortable end was considered slightly more meaningful (and enviable) than life that has a good start and end well (which is not the case for happiness), while the life direction +- was considered as the least meaningful compared to every other kind of life direction (but not for enviableness, where people judged the – life direction as the less enviable).

However, as shown in Figure 3, the protagonist's morality played a much more important role in participants' meaningfulness attributions.

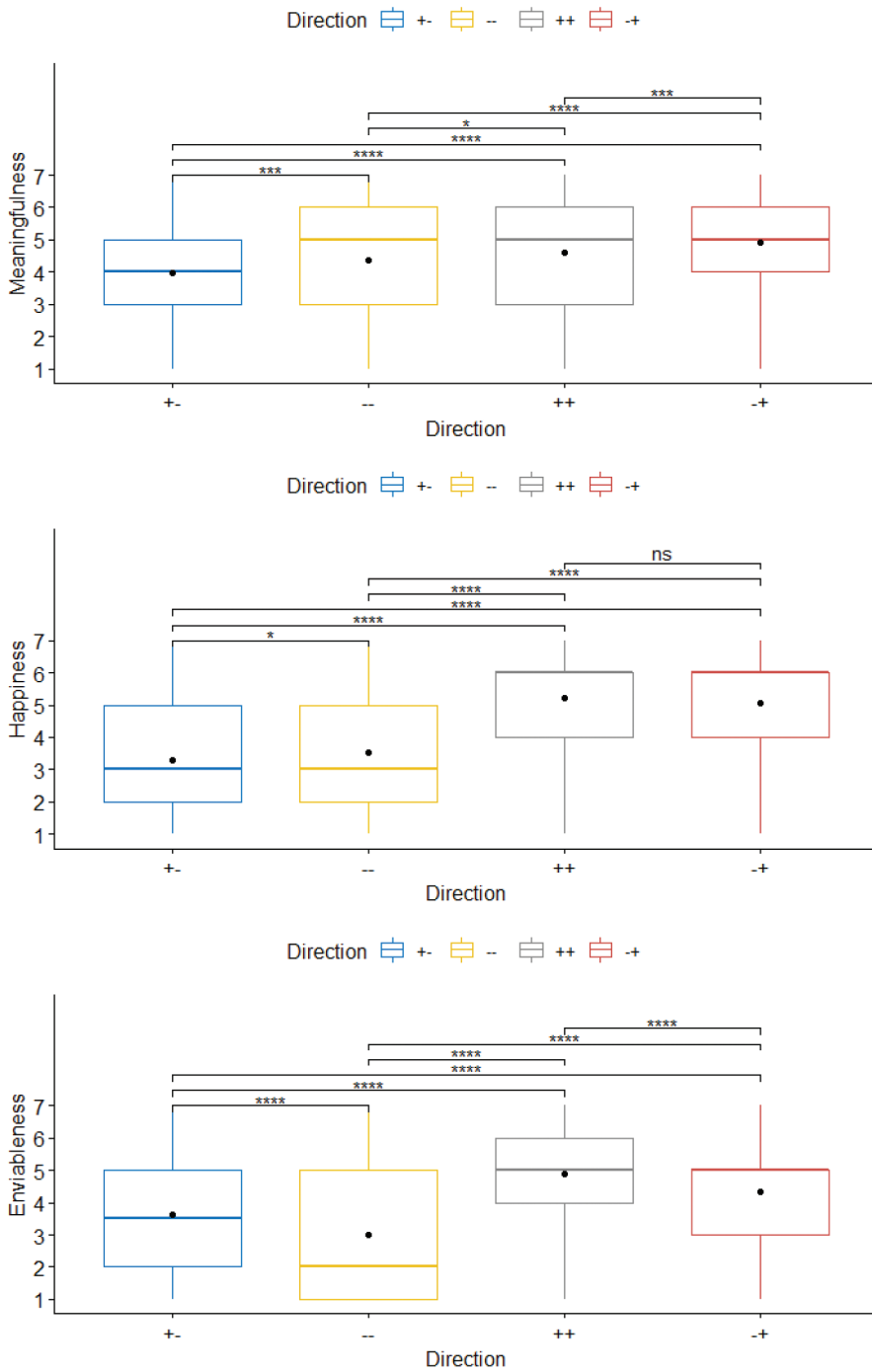### 3.3.4. Ranking lives in function of life direction

For participants' answers to the ranking task, a Friedman test showed that participants made a difference between the different kind of lives with respect to their meaningfulness ($W = 0.12$, $p < 0.001$), happiness ($W = 0.16$, $p < 0.001$) and enviableness ($W = 0.17$, $p < 0.001$). However, as can be seen in Figure 4, this was due to the fact that lives ending badly were ranked worse than lives ending well.

3.3.5. Predictors of meaningfulness attributions

To better understand which factors drove participants' attributions meaningfulness, happiness and enviableness, we conducted three linear regressions with Hard Worker, Good Person, Beginning, Ending and the interaction between Beginning and Ending as factors. Results are presented in Table 6. The best predictor of meaningfulness was morality, while the best predictor of happiness and enviableness was how the protagonist's life ended. Surprisingly, morality did seem to play an important role in attributions of happiness and enviableness (we return to this in discussion).

Table 5. Effects of Life Direction, Efforts and Morality on meaningfulness, happiness and enviableness attributions.

Predictors	DF	Sum Sq	Mean Sq	F	η_p2	p
(a) Meaningfulness						
Direction	3	146.4	48.8	20.95	0.04	< 0.001 ***
Morality	1	1010.8	1010.8	434.06	0.25	< 0.001 ***
Efforts	1	98.8	98.8	42.42	0.02	< 0.001 ***
(b) Happiness						
Direction	3	905.9	302	124.7	0.20	< 0.001 ***
Morality	1	608	608	251.07	0.14	< 0.001 ***
Efforts	1	15.9	15.9	6.56	0.004	< 0.01 *
(c) Enviableness						
Direction	3	621	207.01	77.66	0.15	< 0.001 ***
Morality	1	299	299.01	112.17	0.07	< 0.001 ***
Efforts	1	22	22.44	8.42	0.005	< 0.01 **

Figure 2. Participants' attributions of meaningfulness, happiness and enviableness in function of Life Direction (Study 2). *: $p < .05$ **: $p < .01$, ***: $p < .001$, ****: $p < .0001$.
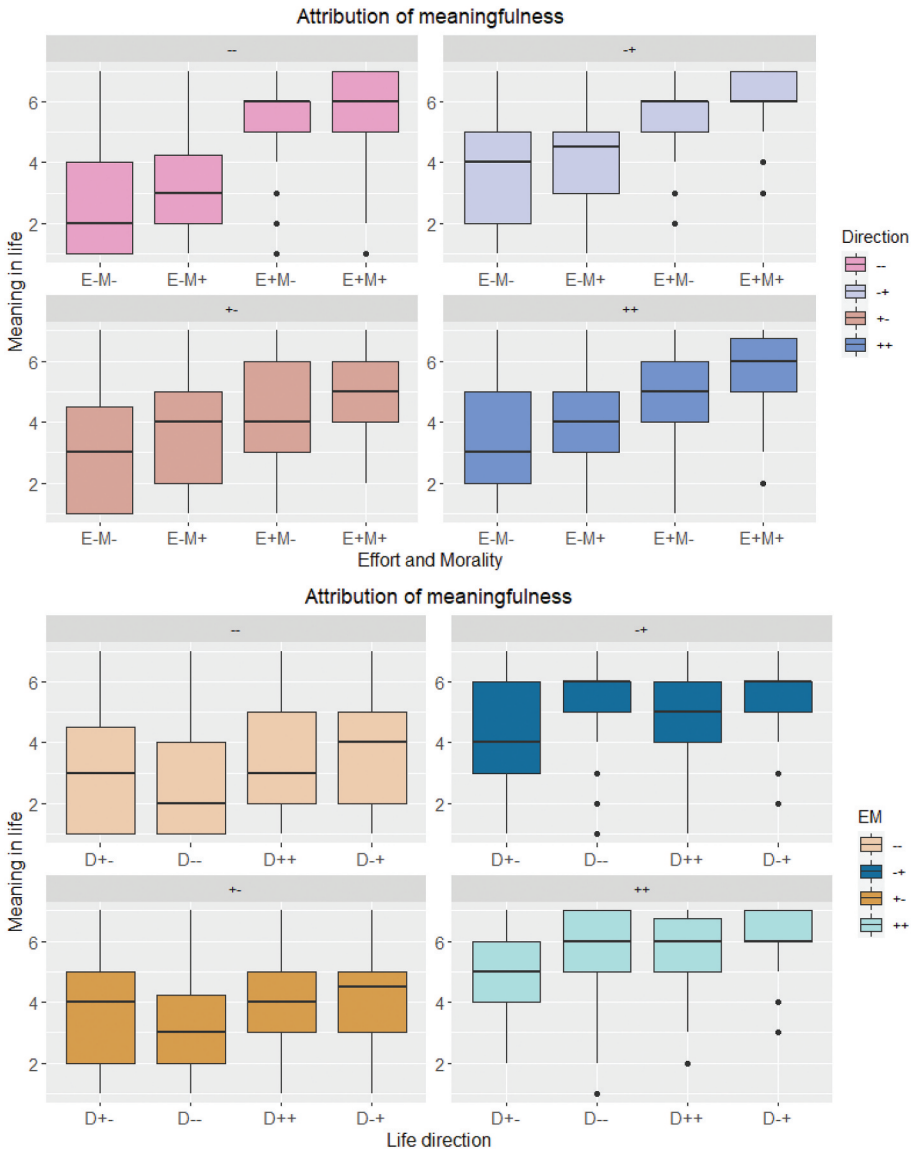
Figure 3. Top: Meaningfulness attributions in function of Efforts (E) and Morality (M), presented separately for each Life Direction. Bottom: meaningfulness attribution in function of Life Direction (D), presented separately for Efforts (E) and Morality (M) (Study 2).

4.4. Conclusion and discussion

As hypothesized by Kauppinen, the temporal dynamic did seem to play a role in participants' attributions of meaningfulness. More precisely, lives that ended well were perceived as more meaningful (as well as happier and more enviable) than lives that ended badly. For example, we found that a life that started badly and ended well was rated as more meaningful than a life that started well and ended badly (see the
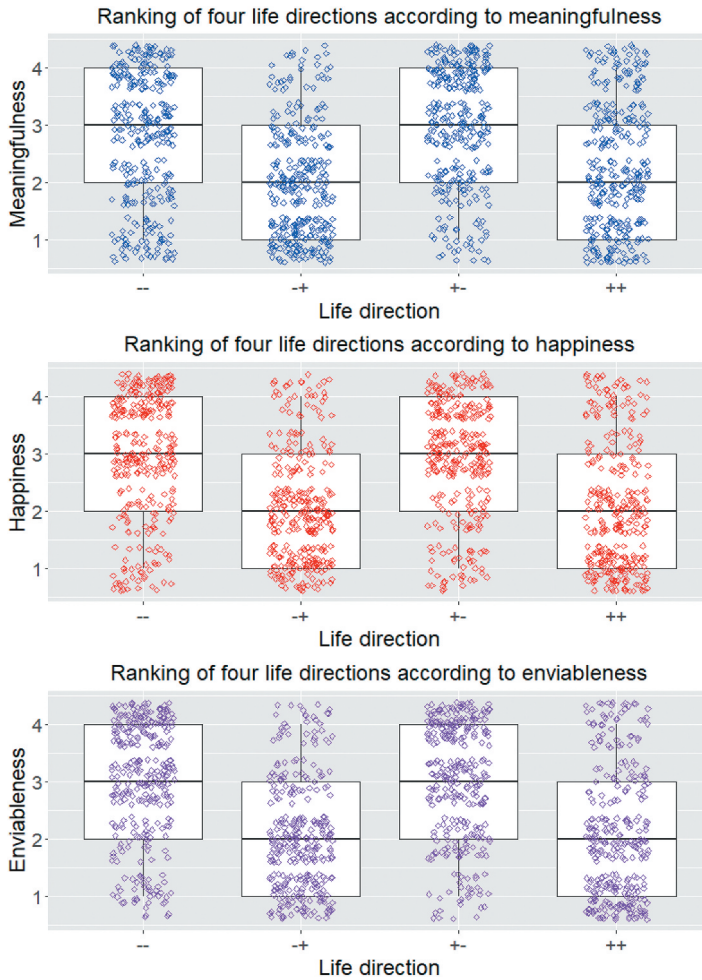
Figure 4. Participants' ranking of four Life Directions, for meaningfulness, happiness and enviableness ratings (Study 2).

significant difference between the -+ and +- cases). Similarly, regression analyses suggested that whether a life ended badly or well significantly predicted attributions of meaningfulness, happiness and enviableness. One might object that these effects are simply due to the fact that participants inferred from our vignettes that the first part of the protagonist's life was shorter than the second (something we left unspecified). But this explanation cannot account for the fact that meaningfulness ratings were lower for +- compared to −, a result incompatible with a simple additive view of meaningfulness. Thus, our results support the idea that the narrative shape of a life plays a role in participants' attributions of meaningfulness.

Similarly, as predicted by Kauppinen, we found that effort was a predictor of meaningfulness attributions.

Table 6. Results of three multiple linear regressions with Hard Worker, Good Person, Beginning, Ending and the interaction between Beginning and Ending as predictors and (a) meaningfulness, (b) happiness and (c) enviableness attributions as dependent variables (Study 2).

Term	Estimate	β	Std.error	t value	p.value
(a) Meaningfulness					
(Intercept)	0.67	0.00	0.15	4.35	< 0.001***
Hard Worker	0.18	0.21	0.02	10.60	< 0.001***
Good Person	0.54	0.61	0.02	30.09	< 0.001***
Beginning	−0.01	−0.02	0.03	−0.5	0.62
Ending	0.17	0.19	0.03	5.20	< 0.001***
Begin*End	−0.004	−0.03	0.006	−0.62	0.54
Adjusted R^2: 0.61, F: 381.7, p < 0.001					
(b) Happiness					
(Intercept)	0.31	0.00	0.17	1.78	0.07
Hard Worker	0.09	0.10	0.02	4.65	< 0.001***
Good Person	0.35	0.38	0.02	17.36	< 0.001***
Beginning	−0.02	−0.02	0.03	−0.53	0.60
Ending	0.44	0.47	0.04	12.22	< 0.001***
Begin*End	0.005	0.04	0.007	0.77	0.44
Adjusted R^2: 0.55, F: 296.4, p < .001					
(c) Enviableness					
(Intercept)	−0.11	0.00	0.17	−0.64	0.52
Hard Worker	0.10	0.12	0.02	5.31	< 0.001***
Good Person	0.27	0.30	0.02	13.12	< 0.001***
Beginning	0.13	0.17	0.03	3.91	< 0.001***
Ending	0.39	0.43	0.04	10.73	< 0.001***
Begin*End	0.006	0.05	0.007	0.80	0.42
Adjusted R^2: 0.52, F: 260.6, p < .001					

However, these results should be qualified by the following observation: while Life Direction (the shape of the protagonist's life) was the most important factor for happiness and enviableness attributions, its impact was negligible for meaningfulness contributions, compared to morality. Indeed, the protagonist's morality was clearly driving the most part of participants' attributions, suggesting that differences in morality might also be biasing our intuitions about Kauppinen's original thought-experiments, which did not keep morality constant.

The impact of morality on attributions of happiness and well-being has already been studied, and previous studies have already observed that the morality of a character can influence to which extent participants consider them as happy or well-off (Díaz & Reuter, 2020; Phillips et al., 2017, 2014). It seems that a similar phenomenon holds for attributions of meaningfulness. But how are we to account for this phenomenon? We can think of at least three explanations. The first one is based on the results of Study 1: we saw that a meaningful life has to be oriented toward *important* goals. Thus, it might be that a moral agent is seen as having a more meaningful life because morality is the most important goal by excellence. The second one is based on the psychological literature around the 'True Self': past literature has

shown that participants tend to see desires and attitudes they morally approve of as more central to a character's identity than immoral desires and attitudes (Strohminger et al., 2017). Thus, it could be that participants tend to consider that, deep down, our immoral protagonists do not really want to live an immoral life, and thus are not engaged in activities they like and find fulfilling. The third possible accounts starts from the observation that morality also drove participants' attributions of happiness or enviableness. One could thus wonder if participants do not draw certain inferences from the fact that agents are immoral. Maybe they tend to infer that immoral agents are less likely to have friends or family who truly love them. This, in turn, might shape their attributions of meaningfulness, happiness and enviableness. Future studies will be needed to adjudicate between these various accounts.

5. General discussion

In this paper, our goal was to empirically investigate the lay concept of meaningful life by studying how participants evaluate the meaningfulness of other people's lives.

A first lesson we can draw from our results is simply that people do not conflate a meaningful life with a happy life: though both attributions were correlated, they were not sensitive to the same kind of considerations, nor to the same extent. This is coherent with the distinction Huta and Waterman draw between 'hedonism' and 'eudaimonism' (Huta, 2016; Huta & Waterman, 2014), according to which "eudaimonia and hedonia are based on two distinct and complementary sets of psychological processes: cognitive values vs. emotional/physical pleasure, broad focus vs. self-focus, long-term perspective vs. short-term perspective". It is also in line with Wolf's claim that happiness, although it is a part of the good life, is a different aspect from meaningfulness.

A second lesson was that judgments about whether a life is meaningful were mainly driven by three factors: (i) whether the agent is engaged in an activity she finds fulfilling, (ii) whether the agent was pursuing goals that were considered important by participants, and (iii) whether the agent was moral. The first two components match Susan Wolf's analysis of what it means for a life to be meaningful: it involves both a *subjective* component (the fulfillment) and an objective *one* (the importance of the goal). The third component (morality) was a bit more surprising – not because we expected morality to play *no* role in judgments of meaningfulness (after all, past studies have repeatedly found that social commitment, care, and morality are among the key sources of meaning; see, Schnell, 2011), but because of the *importance* it had in predicting participants' judgments of meaningfulness. It was by far the best predictor of participants' judgments. One might

take this to go against the claims of several philosophers who have argued that meaningfulness is distinct from morality (Kauppinen, 2012) and that concerns about meaning constitutes a sort of 'third way' between mere self-interest and impartial moral duties (Wolf, 2010).

Thus, one question raised by our results is whether morality is only one source of meaning among others and only has a contingent relationship with meaningfulness, or whether their connection runs deeper. On the basis of our results, several options are open to those who would want to argue that this relationship is only contingent, some of which we mentioned at the end of the previous section. One of them is that this third component (morality) could be considered as a particular instance of the second (having an important goal). As Kauppinen puts it: "for us ordinary folk who are not particularly talented in art or science, morality may be our best bet for a source of meaning: we cannot all exceptionally gifted, but we can all aspire for moral excellence" (Kauppinen, 2012, p. 377). Given that morality might have been the only important goal salient in our vignettes, the focus on importance might have explained the weight participants gave to morality. In this view, morality would have no place in people's *concept* of meaningful life, but dedicating oneself to moral objectives would be a salient and wide-spread *conception* of the meaningful life (e.g., an obvious way to pursuing important goals or making a positive contribution).

Another possibility, though, is that morality holds a special place in our *concept* of meaningful life, that would severely limit its application to immoral lives. Past studies in experimental philosophy have suggested that this might be the case for other folk concepts such as *happiness* (Phillips et al., 2014) and *love* (Phillips et al., 2011) and maybe the same is true for our concept of meaningful life. After all, when asked to think about paradigmatically mean-ingful lives, most examples that come to mind are lives that have made a positive contribution to the common good. Moreover, King and Napa (1998) have observed that people tend to infer that one is moral from the fact that one's life is meaningful. It might thus be that some components of our concept of meaningful live are inherently moral. To determine which possibility is the right one, further studies will be needed, for example, by investigating whether it is possible to have people judge that an immoral person can have a meaningful life. For example, would people consider that an artist who has made great contributions to their domains while being a deeply immoral person had a meaningful life?

But what of Kauppinen's "narrative" objection to the New Standard View? As suggested by Kauppinen, the results of Study 2 suggests that people's judgment about the meaningfulness of a life is not only a function of its components but also of the way these are temporally organized. To our knowledge, our study is the first to report this effect.[4] Should we follow Kauppinen and concludes from this observation that the New Standard

View is flawed and does not accurately describe the folk concept of meaningful life, and that we should move to a fitting-attitude analysis of the concept? Not necessarily. One reason to resist this conclusion is that (i) we also found an effect of temporal dynamics for participants judgments about the happiness and enviableness of a life, and (ii) that the impact was much higher for these judgments than for judgments about the meaningfulness of lives. Thus, if we consider our results are reason enough to move to a fitting-attitude analysis of the concept of meaningful life, we should do the same for the concepts of happy and enviable life. Some might find this move implausible. Moreover, other solutions might be available. A first one is to stick with the current version of the New Standard View and discount the effect of temporal dynamics on judgments about meaningfulness as some kind of performance error caused by cognitive biases. For example, one might think that participants are simply more sensitive to information presented at the end of vignettes. However, our personal preference goes for a second solution: modifying the New Standard View so that it can account for the effect of temporal dynamics. For example, one might add that a meaningful life is not simply one in which one is involved in important activities, but one in which one *flourishes* through being involved in important activities. Such a modification might emphasize the fact that a meaningful life involves growth, and thus contribute to explain the importance of temporal dynamics.[5]

Of course, this is only a possible suggestion among countless others. For now, our results suggest that an appropriate account of the lay concept of meaningful life should allow us to make sense of the role played by temporal organization. Though we ourselves think that this effect reflects something important about our concept itself, further studies will be needed to properly understand the nature and relevance of this effect.

Notes

1. One could (justifiably) argue that the Blob engages in some form of action: watching television and drinking beer do count as 'doing something'. Indeed, though intuitive, the difference Wolf makes between the Blob and the Useless is hard to articulate explicitly. One way to elucidate this difference is in terms of *commitment*: contrary to the Useless, the Blob doesn't have goals he actively seeks and is ready to make efforts to achieve. Rather, her activities are not sought for themselves but only as a way to pass time. Thus, it is probable that, if pursuing any of these activities required efforts and dedication, the Blob would abandon it for an easiest and more accessible one.
2. This remark should not be taken as meaning that we consider Kauppinen's fitting-attitudes analysis as not worth investigating. However, this is a topic for further research (see, Cova, 2022). In the current paper, we focus on Wolf's account and the objection Kauppinen raises against it on the basis of considerations about the narrative shape of a life.

3. Kauppinen is not the only philosopher to have discussed how the shape of a life impacted its value (see for example, Campbell, 2015; Dorsey, 2015; Dunkle, 2021), but (to our knowledge) his paper is the most in-depth discussion of the impact of the shape of a life on its *meaningfulness* (rather than on its overall prudential value).
4. Of course, that's not to say that psychologists have ignored the role of temporal dynamics in other construct, such as pleasure. For example, a seminal study by Fredrickson and Kahneman (1993) famously suggested that, when asked to assess the hedonic value of a given experience, people give more weight to the final moments of this experience. However, to our knowledge, the role of temporal dynamics in judgments of *meaningfulness* has never been empirically explored so far.
5. Another solution would simply be to draw on Kauppinen's proposal according to which Wolf's slogan according to which "subjective attraction meets objective attractiveness" should be supplemented with another slogan "challenging efforts lead to lasting success". Though Kauppinen advances this solution as a *conception* of a meaningful life, it is possible to work it into an account of the *concept* of meaningful life.

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