Dear Gustavo,

We appreciate the chance to revise our piece and thank you for all your comments and suggestions. We have added all your suggestions accordingly. Below you can find a point-by-point response with an explanation on how we approached your comments.

1) **(almost) all our articles (and all those that present measures) come with numbers: tables, figures, evolution over time, comparison between countries, genders, socio-economic groups. Instead, you do not have a single number in your article! Why? You need to insert them - several of them, I suggest.**

We added three figures to motivate our argument with respect to how lifespan inequality is important, how it relates to life expectancy, and how these two measures react to changes in mortality over age. In addition, we included several numbers that back up our arguments based on data from the Human Mortality Database and from other studies throughout the text.

2) **Your article is about inequality, and you do not even define it. How come? Please do it - first thing.**

The first section now has been relabeled to 'What are life expectancy and lifespan inequality.' In this section we define life expectancy and lifespan inequality from the beginning. Further, the concept of lifespan inequality is motivated by its significance at the individual and population levels with an example of Italy illustrated in figure 1, which we calculated. Note that we do not use inequality in the normative sense of fairness or justice. Although ages at death are partially shaped by social and economic inequalities, we simply use lifespan inequality as an additional descriptive measure of the shape of the distribution of lifespans.

3) **You claim that there is a historical relation between life expectancy and inequality, but I do not see it anywhere in your article (OK, I admit: this is practically the same as point 1).**

In addition to a known article, we illustrate the relationship between life expectancy and lifespan inequality in figure 2 plotting life expectancy against lifespan inequality for Italy from 1920 to 2017.

4) **At the beginning and at the end (conclusions) you say that, if one must choose (because of limited resources), it is better to save a young life than an old life. Frankly, this is obvious to everybody, and is already incorporated in several widely used measures (e.g. DALY). Anyway, OK: there is no evil in repeating it (although, if I may suggest, it should be presented for what it is: an obvious notion), especially in that it fits well with the issue of inequality.**

Historically, it is well known that reducing mortality at infancy and very young ages increases life expectancy as you point out. However, this has changed in low mortality countries. As we show in Figure 3, in Italy today reducing infant mortality by 5% leads to the same gain in life expectancy as reducing mortality at age 79 by 5%. The allocation of resources it therefore not trivial and can have implications for the relationship between life expectancy and lifespan inequality.

5) **But then you present the examples of Central and Eastern Europe plus Venezuela, where things run counter your argumentation: better survival at young ages leads to greater inequality. This needs to be qualified (with numbers, dates, etc.) and to be justified. Instead, you present things almost as if they were corroborating your point (e.g. "increased lifespan inequality in periods when ... improvements in mortality at very young ages").**

Thanks for this comment, we realized that the previous text was not conveying the message we wanted to deliver. The text has been rephrased and we focus on the Venezuelan case now to make our point. While most studies focusing in low-mortality countries show a strong negative association between life expectancy and lifespan inequality, recently more cases are showing that this relationship is not automatic, i.e. that a rise in life expectancy is followed by a decrease in lifespan inequality. To make this point we include the Venezuelan example where lifespan inequality increased together with life expectancy. This resulted from divergent patterns of mortality improvements. We now include specific numbers accordingly in the text.

6) **You seem to imply that this (increasing) inequality is linked to SES (socio economic status) but you don't prove it in any way - not even suggest it illustratively. Now, if this connection with SES is not there, I am not sure that I agree with what you say. Let me use the following example. Imagine that everybody is guaranteed to survive up to 80 years. Then you can choose between three scenarios (all yielding exactly to e0=85)**
a) everybody dies exactly on the day of their 85th birthday, at noon;
b) everybody dies between their 84th and the 86th birthday (at random)
c) there is a very wide (and random) dispersions of ages at death past age 80 (with average 85).
As you move from a) to c) inequality increases. Is (a) your preferred scenario? Would you like to know the exact day and time of your death? Do you think that this preference of yours is shared by everybody, or at least by the vast majority? I doubt it.

Various studies have shown that individuals in lower-SES groups have higher lifespan inequality. We have added the example of Finland (van Raalte et al., 2018), where lifespan inequality increased among disadvantaged groups and decreased for advantaged groups between 1971 and 2014 even though life expectancy increased for all groups. The fact that this connection exists is troubling, because research has found that individuals base their decisions about saving and investing, among other things, on when they expect to die (e.g. Bloom et al., 2006). Moreover, studies have shown that, despite the fact that most individuals do not know about life tables, their predictions about their own lifespan and variation are usually accurate because they are based on the experience of their peers (e.g. Hurd & McGarry, 1995: Evaluation of the Subjective Probabilities of Survival in the Health and Retirement Study, Dortmond et al, 2018: Individual Uncertainty About Longevity. Demography). This implies that:
   a) Lower-SES individuals experience more uncertainty about the timing of their death (because they witness greater variation in the timing of death of their family members and friends)
   b) The higher uncertainty means that they may be less able to make favorable saving and investment decisions (including retirement, wealth accumulation…).
So, our argument is that, in the scenario where everyone dies at 85, everyone is better able to "plan around" the timing of their death, and this is a positive thing. Moreover, if we consider countries with

lower life expectancy and greater lifespan variation, a scenario with high lifespan inequality (e.g. a wide dispersion in ages at death between 30 and 70) would definitely be "worse" for making important life decisions like when and whether to save or retire.

7) **When it comes to differences by SES, I stick to the old-fashioned idea that if blue collars die at (say) 75, while white collars die at 85 (general average=80, for the sake of the argument) this is unjust, unequal, etc. Adding other measures of inequality (within groups I suppose? That between groups is already in the 10 years of difference in life expectancy), adding these new measures, I was saying, simply blurs the picture, and distracts from the main problem. Am I wrong? Most likely. But please prove it.**

In terms of the mortality experience of different population subgroups, yes, it is definitely unfair that lower-SES groups die younger. What we argue is that, in addition to dying younger, lower-SES individuals also experience greater uncertainty around the timing of their death. For the reasons illustrated in the point above, we consider this to be a "double burden" (we have now specified this in the paper).

In terms of understanding mortality at the population level, life expectancy is a useful summary measure, but it does not provide an estimate of variation in lifespans. Therefore, if we only look at changes in life expectancy, we simply cannot tell how equally improvements in mortality are distributed in the population. Lifespan inequality conveys this information and, as we argue in the introduction and conclusion, it is worth using to complement life expectancy as a measure of mortality.