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Good Enough for Government Work?
Life-Evaluation and Public Policy

By Noel Semple[1]

1.1 Introduction

"All things considered, how satisfied would you say you are with your life these days?" Versions of this *life-evaluation* question have now been posed to tens of thousands of people around the world. The permitted responses are numbers, usually on a scale of 0 (completely dissatisfied) to 10 (completely satisfied). Comparing respondents' life-evaluation scores with their circumstances has produced robust findings about what makes people give higher or lower numbers, reported in the *Journal of Happiness Studies* and elsewhere (Veenhoven 2018).

What role should these findings play in welfare-consequentialist policy analysis? That is the question posed by this article. Welfare-consequentialism is the view that ethical obligations can be derived by impartially ranking alternative courses of action based on their expected welfare outcomes (Adler 2019). Welfare is aptly defined by Valerie Tiberius (2006) as "what we have when our lives are going well for us." Government, according to welfare-consequentialism, should try to make individuals' lives go as well as possible for them.

What makes a life good for the individual living it is a matter of enduring controversy. Welfare-consequentialist policy analysis does not, I will suggest, require a resolution to the ancient debate between "constitutive" theories about what welfare actually is (Hausman 2011). What it does require is an acceptable "evidentiary" theory of welfare: a workable method for quantitatively estimating the lifetime welfare of individuals under different policy scenarios (Morey 2018).

How well does life-evaluation perform in this role? I argue that it is a useful and philosophically sound way to measure welfare for the purpose of analyzing policy options. However welfare-consequentialist analysis of public policy must also, sometimes, consider the extent to which individuals' welfare-relevant preferences would be fulfilled under different policy scenarios.

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Part 2 (Thesis) presents the case for life-evaluation as a policy-oriented indicator of individual welfare. The practicality of this approach is illustrated by the successful welfare-consequentialist argument for the expansion of mental health spending in the United Kingdom. Changes in aggregate life-evaluation scores may also helpfully measure the overall success of a government's policies. The state should be neutral regarding constitutive theories of welfare. Life-evaluation is compatible with this neutrality, because it lets each respondent apply her own standard(s) of welfare to her own life.

However, Part 3 (Antithesis) identifies four situations in which life-evaluation fails to adequately track individual welfare, and welfare-consequentialist policy analysis using only this type of data would therefore lead to indefensible conclusions. While the life evaluation question gives each respondent a reasonable opportunity to report on feelings or objective accomplishments that she considers relevant to her welfare, the same is not true regarding the fulfilment of some welfare-relevant preferences. In some cases the life-evaluation survey instrument fails to detect preference-fulfilment that is relevant to welfare. In other cases, an individual evaluating her life cannot possibly know how well her life will meet her preferences about that life.

Part 4 pursues a synthesis between Part 2's thesis and Part 3's antithesis. It describes preference-fulfilment measures of individual welfare, which share key philosophical virtues of life-evaluation measures. It argues that they can fill in the gaps left by life-evaluationism. *Subjective synthesis welfare-consequentialism*, measuring welfare through both life-evaluation and preference-fulfilment, can better deliver on welfare-consequentialism's promise to identify the policy choices most likely to make life go best.

2 Thesis: The Merits of Life-Evaluationist Welfare-Consequentialism

A life-evaluation question asks a person to quantify their overall satisfaction with their own life, at the time when the question is asked.[2] These questions include a phrase such as

[2] An alternative is to ask respondents how "happy" they are with their lives overall. Because such questions also solicit a global evaluation of one's life, they are essentially life-evaluation as well. See e.g. Clark 2016, and Helliwell et al 2018, Chapter 2. Life-evaluation is one variety of subjective well-being question. Other types ask respondents about their feelings, or about how fulfilling or meaningful their lives are for them.

"taken all together," "all things considered," or "overall." They are designed to elicit a global evaluation of life, as opposed to a report on momentary mood or feelings.

In over 40 countries, life-evaluation questions are part of routine government statistics-gathering (Diener and Seligman 2018; Veenhoven 2018b). Randomly selected samples of people are asked life-evaluation questions, along with other questions about their lives. The questions are also used in panel studies, which track a group of individuals over the course of their lives to see how different life events affect their life-evaluation scores (Lucas and Donnellan 2012).

A large and growing body of research identifies the factors that tend to make people give higher or lower life-evaluation scores. Genes play a role: one person may report higher life-evaluation than another despite identical (or "worse") life history and circumstances (Bradshaw, Keung et al. 2011 at 549). However, it is equally clear that identifiable resources, experiences, and goods consistently improve life-evaluation reports (Graham 2011 at 11). For example, British adults in spousal relationships report average life-evaluation that is 0.8 points (out of 10.0) higher than the number given by single people (Clark, Fleche et al. 2018 at 170). Being employed also makes a large positive difference (Diener, Lucas et al. 2009 at 161; Bok 2010 at 76). Higher income tends to make a person more satisfied with their life, but the effect per dollar shrinks as income increases (Deaton 2008).

Government has the power to affect many of the things that change people's life-evaluations. Writing by scholars such as Ruut Veenhoven (2010) and Richard Layard (Layard 2011) suggests that increasing life-evaluation should be a primary overarching goal of public policy. *The Origins of Happiness*, a 2018 book by five scholars including Layard, argued that "well-being creation" should replace wealth creation as the "new role for state" (Clark, Fleche et al. 2018 at 325). Adult well-being, in this volume, is measured exclusively in terms of life-evaluation. Layard and Daniel Clark state that it is "difficult to think of any other reason for government to exist" other than the maximization of life-evaluation reports (Layard and Clark 2013 at 244).

"Strong" welfare-consequentialism holds that increasing aggregate welfare is the *only* purpose of government (Adler and Posner 2008 at 256). On this view, traditional state goals such as upholding human rights, national defence, and environmental protection are not valuable

as ends, but rather only as means to this end.[3] "Weak" welfare-consequentialism, a more mainstream view, holds that improving welfare is one among multiple intrinsically-valuable goals of state action. Both weak and strong welfare-consequentialism require a method to measure welfare, and life-evaluation is a plausible candidate.

2.1 Practicality

Life-evaluationist welfare consequentialism can be defined as the view that the state should seek to maximize aggregate welfare, measured in terms of life-evaluations. Practicality is a strength of this approach. It is easy and cheap to pose the life-evaluation question to large and diverse samples of people. Perhaps for this reason, the total number of people whose welfare has been estimated using this technique dwarfs the corresponding numbers for other approaches. Ruut Veenhoven's World Database of Happiness (Veenhoven 2018) includes 16,000 correlational findings, drawn from 2000 studies, regarding the circumstances that increase life-evaluation for human beings. Although the respondent's mood or their attitude to the survey question can affect their response, the samples are large enough to filter out this "noise" and allow true effects to be estimated (Helliwell 2011 at 613).

A certain person might rationally give a wide range of responses to a life-evaluation question. Respondents are not instructed about how to evaluate their lives (Haybron 2016). However, this does not prevent a large majority of respondents from answering the question, and giving answers that are stable from day to day (Helliwell 2011, Diener, Lucas et al. 2009). All of this favours the emergence of robust conclusions about the things that (i) drive life-evaluation reports and (ii) are susceptible to policy intervention.

The fact that life-evaluation might be problematic for other purposes does not necessarily make it any less useful for the purpose of welfare-consequentialist policy analysis. As Haybron (2016) argues, while life-evaluation falls short as a measure of absolute individual welfare, it does accurately indicate "which things tend to make people's lives better or worse." Welfare-consequentialist policy analysis generally compares the effects of multiple policy options on a

[3] However, strong welfare-consequentialism might still be reconciled with obedience to pre-established decision procedures on epistemic grounds. Because the ability of humans to accurately predict the consequences of policy options is sharply limited, it can be argued that welfare is more likely to actually be maximized if some decisions are made in deference to rules or traditions, rather than through efforts to predict and account for every welfare effect. See Goodin 1995 and Weinzierl 2019.

single large population. Even if life-evaluation struggles to ground comparisons between two individuals (Kahneman and Krueger 2006 at 18; Boettke and Coyne 2012), or comparisons between two different populations (Haybron 2016, Alexandrova and Singh 2018), that may be no impediment to the use discussed here.

2.2 The Life-Evaluationist Case for Mental Health Spending

The case for increased mental health spending in the UK, advanced by Richard Layard and his collaborators, is an example of welfare-consequentialist policy analysis grounded in life-evaluation measures of individual welfare (Layard and Clark 2013). Within this argument, life-evaluation data is used first to establish the significance of the problem, and then to establish the efficiency of the proposed solution (state-funded therapies) as a way to increase aggregate welfare, relative to other things the government might do instead. The argument is analyzed here to illustrate the practical strengths of life-evaluation as a policy-ready measure of individual welfare.

Mental health problems are more common than many people believe. They affect roughly 20% of the population of OECD countries in any given year (OECD 2014 at 16). Mental health status is among the best predictors of an individual's life-evaluation in many wealthy countries. For example, according to one large-scale study of Connecticut residents, a reported life-evaluation improvement of 25.2 points out of 100 can be expected if an individual moves from "very often" feeling "down, depressed or hopeless in the past month" to "never" feeling that way (Barrington-Leigh and Wollenberg 2018).

In the UK, mental health has substantially greater effect on life evaluation than income, employment status, or physical health (Clark, Fleche et al. 2018 at 214; Veenhoven 2010). This is evident both in studies tracking people over time as their mental health status changes, and in studies comparing people who have mental health problems against people who do not. The samples in life-evaluation studies are large and diverse enough to allow causation relationships to be established. It is *not* the case, according to this research, that poverty and/or unemployment are the real root causes of low life-evaluations, and these phenomena also cause mental health problems. Rather, mental health problems – which afflict employed and wealthy people almost as often as they afflict unemployed and poor people – are the leading root cause of

low life-evaluation (Clark, Fleche et al. 2018 at 325).[4] The large sample sizes also mean that sources of bias in life-evaluation responses (e.g. the tendency of respondents to give different numbers on different days of the week) do not prevent conclusions about causation.

People adapt to some things over time, causing the effects of those things on their life-evaluations to fade. For example, scores typically suffer a sharp drop after bereavement, but they recover over time (Clark, Fleche et al. 2018 at 179). This is not the case for mental health conditions: one does not get used to them. They typically make one's life-evaluation substantially worse for as long as they last (Layard 2006 at 29).

Establishing the long-term welfare-suppressing effects of mental health problems is not sufficient to make a welfare-consequentialist case for increased mental health spending. Some things that make people's lives worse for them (e.g. rainy weather or heartbreak) might be beyond the capacity of any government to prevent or mitigate. Mental health problems are not in this category. Interventions such as cognitive behavioural therapy have been proven to improve individuals' mental health, and thus their life-evaluations, according to Layard & Clark. Moreover, many people who would benefit from such treatments will not obtain them unless the government helps them to do so. Finally, wealthy states have the fiscal capacity to provide the treatments.

Under *prioritarian* welfare-consequentialism, the distribution of welfare among individuals matters as well as the total amount of welfare (Parfit 1995; Adler 2019). Mental health interventions are especially compelling to a prioritarian welfarist. Their benefits disproportionately help the worst-off people in society: those with life-evaluations in the lowest 10% (Layard and Clark 2013 at 64).

Improving the life-evaluations of those with mental health problems is the most direct welfare benefit of publicly-funded mental health services. Call this a "first order" welfare benefit. However, the depth and breadth of life-evaluation research allows it to identify relatively small welfare effects, and effects brought about by chains of causation. "Second order" or "knock-on" welfare benefits occur when an intervention has an effect, after some time

[4] At 325. This claim has been criticized on the grounds that the simple regression modelling used in this volume fails to capture the true relationship between poverty, inequality, and mental health. See Alexandrova & Singh 2018, and Psychologists for Social Change 2016.

has passed, on someone other than the first order beneficiary. In this case, the *Origins of Happiness* argues that treating the mental health problems of parents eventually improves the life-evaluation scores of their children, by allowing the service-recipients to be more effective parents. Treating working-age adults is also likely to improve economic productivity and tax revenues, by improving the employment prospects of those receiving treatment (Layard and Clark 2013 at 44; All-Party Parliamentary Group on Wellbeing Economics (UK) 2019 at 11). Thus the welfare benefits of improving mental health services include first-order benefits for service-recipients, and second-order benefits for those who rely on service-recipients at home or work.

Physical health problems, by contrast, are more likely to afflict older people without jobs or young children. Relieving them therefore produces fewer second-order benefits. For this reason, a welfare-consequentialist division of total public health spending between mental and physical health services would likely favour the former category more than a rights-based approach would. Those affected in an indirect or attenuated way by a government decision – such as those economically dependent on people suffering from treatable mental health problems – are unlikely to have rights-claims regarding that decision. Welfare-consequentialism, by contrast, seeks to factor in *all* of the welfare consequences of public policy decisions.

So far, this welfare-consequentialist policy analysis suggests that (i) increasing the state funding for evidence-based mental health interventions would produce a relatively large, long-term increase to life-evaluation, (ii) this first-order benefit would be skewed toward people who would otherwise have very low life-evaluations, and (iii) there are also relatively strong second-order benefits for other parties. However, the analysis cannot end here. The funds to be spent in this way cannot be grown on a government money tree. Whatever steps are taken to find the money will have some negative welfare effects on some individuals. If the funds are raised from new taxes, this will have some first-order negative effects on taxpayers and second-order effects on other economic actors. If the funds are taken from other parts of the budget, it is likely that someone else's life-evaluation will eventually suffer due to the cuts. Layard & Clark argued that mental health investments would pay for themselves in fairly short order, due to the second-order benefits identified above (see also Bok 2010 at 95). The author is not aware of any study confirming this "return on investment" claim. Even if it is true, some short-term negative welfare effects will occur because the money must be found before the return is realized.

The key point is that life-evaluationist welfare-consequentialism promises to identify the policy option that can be expected to maximize aggregate welfare. From this point of view, the amount spent on mental health should be the amount that will maximize expected aggregate life-evaluations among affected individuals, after weighing the welfare losses caused by finding the money against the welfare gains caused by spending it in this way. In principle, this approach can be applied to any public policy question. Even if there are legal, financial, or philosophical constraints on the state's pursuit of aggregate welfare ("weak" welfare-consequentialism), life-evaluationist welfare-consequentialism proposes to identify the option within the constrained set that can be expected to produce the best lives for all affected parties.

Apparently accepting Layard et al.'s argument, the UK government substantially increased publicly-funded mental health services. The Improving Access to Psychological Therapies (IAPT) program, created in 2008, provided services to over 1 million people per year by 2019 (Nuffield Trust 2018). Perhaps inspired by this success, Layard and his collaborators applied this approach to a broad range of public policy options in their 2018 monograph *The Origins of Happiness.*

2.3 Measuring Policy Success using Life Evaluations

Life-evaluation data might also be useful for a global evaluation of a government's performance. For example, the average life-evaluations of UK residents increased from 7.35 to 7.66 (out of 10) between mid-2011 and the fall of 2019 (Office for National Statistics (UK) 2020). Public policy might deserve applause for this substantial improvement, if the effects of public policy on UK residents' life-evaluations can be distinguished from the effects of non-policy factors.

Averages may obscure significant facts about the distribution of scores (Weijers and Morrison 2018 at 8). Prioritarians hold that improving the welfare of worse-off individuals is more important than improving the welfare of better-off individuals (Parfit 1995). Prioritarians might cheer the fact that improvement in UK life-evaluations over recent years was *not* merely a result of highly satisfied people becoming even more satisfied. The proportion of the UK population evaluating their lives as less than 5 out of 10 decreased from 5.98% in 2012 to 4.53% in 2019.

Nevertheless, even a policy-attributable, well-distributed increase in aggregate life-evaluations would not automatically entitle government to pat itself on the back. Most versions of welfare-consequentialism require that welfare effects of policy on unborn people (Stiglitz, Sen et al. 2009), as well as foreign residents (Broome 2016) be considered. Some would include animals as well (see section 3.2, below). A different set of policies (e.g. rapidly decarbonizing, eliminating the budget deficit, and increasing foreign aid spending) might have produced lower life-evaluations for current UK residents, but higher aggregate life-evaluations for all affected parties, including those not currently present in the jurisdiction.[5]

2.4 Neutrality and Deference

There is deep and persistent disagreement about the essence of welfare. Hedonist theories hold that pleasure, and the absence of pain, make a life good for the individual who lives it. Objective-list theories identify specific attainments or capabilities (e.g. friendship, or access to education) whose presence or absence in a certain life determines its welfare. According to preferentist theories, an individual can hold certain types of preference which, if fulfilled, make that individual's life good for them. These are all *constitutive* theories, about what welfare actually is.

Life-evaluationism, by contrast, is an *evidentiary* theory of welfare. It claims that an individual's life-evaluation numbers should be considered dispositive evidence of that individual's welfare, for the purposes of welfare-consequentialist policy analysis. Further, the welfare of individuals who have not provided life-evaluation numbers (including those who are unborn) should be estimated based on the life-evaluation numbers we predict they would give if asked.

For a state dedicated to a particular constitutive theory of welfare, life-evaluationism would be a poor evidentiary theory. Suppose everyone affected by the policy decisions of the state of Hedonia subscribes to a hedonist constitutive theory of welfare. Hedonia can legitimately make policy on the assumption that this theory is true. If so, Hedonia should

[5] Some argue that welfare-consequentialist analysis should discount, or disregard completely, the welfare of animals, and/or foreigners, and/or the unborn. This could be because including them is too morally demanding: Miklós 2017, or because a government has special obligations to its own citizens: Goodin 1995; Miller 2005. Another live question in welfare-consequentialism, beyond the scope of this paper, is whether and how to account for individuals who will only be born if one policy option is implemented.

logically measure and seek to maximize individuals' pleasures, not their life evaluations. Suppose the state of Objectivia obtains, through divine revelation, an objective list of things that make life good. Objectivia should measure and seek to maximize not life-evaluations, but rather the extent to which individuals actually have the things on the list.

In fact there is no consensus, and no divine revelation, supporting any constitutive theory of welfare. Real human governments should therefore be neutral between them. Perhaps counterintuitively, this neutrality does not foreclose welfare-consequentialist policy-making. Life-evaluationism is an evidentiary theory that allows the state to measure and seek to advance individual welfare, without making any presumptions about what welfare actually is.

This is because it *defers*, not only to individuals' own judgments regarding their own lives, but also to whatever commitments they may have to constitutive theories of welfare. In answering the life-evaluation question, a respondent can factor in most of the things that, to him or her, make life better or worse. The opportunity can be used to report on one's pleasures and pains, (Sumner 1996 at 202), and/or report on the extent to which one's life includes welfare-constituting capacities or achievements. It is also a good opportunity (although, Part 3 argues, an imperfect one) for a person to report on the extent to which his or her preferences about his or her own life have been fulfilled (Adler 2012 at 1544). A person who has always wanted to graduate from high school, or to have full mobility, will know whether he has done so or not, and he is free to adjust his life-evaluation number accordingly.

3 Antithesis: What Life-Evaluation Misses

Notwithstanding these virtues, life-evaluationist welfare-consequentialism has significant shortcomings. Life-evaluation reports are sometimes unable to manifest the fulfilment of preferences that, under a preferentist constitutive theory, would be highly relevant to the welfare of the respondent. While the life-evaluation question creates room for respondents to evaluate their actual lives against the yardsticks proposed by other major constitutive theories of welfare, it does *not* create adequate room for the preferentist yardstick.

After briefly defining the preferentist constitutive theory of welfare, this Part identifies four situations in which an individual's lifetime welfare, under a such a theory, would be misrepresented by their life-evaluations. A purely life-evaluationist welfare-consequentialism is therefore incomplete, necessitating the synthesis with preference-fulfilment measures that is proposed in Part 4.

3.1 The Preferentist Constitutive Theory of Welfare

Under the preferentist constitutive theory, an individual has welfare to the extent that their welfare-relevant preferences are fulfilled (Hausman, McPherson et al. 2016 at 213). A preference, according to one leading definition, is a disposition to choose (Baber 2017).[6] One *prefers* x to y if one would, with adequate information and sufficient deliberation, choose x over y. One can desire what one does not prefer, if for example the desire is formed in the absence of adequate information and sufficient deliberation. One can also prefer something that one does not desire, for example because one does not know of its existence (Luper and Balotskiy 2014, Baber 2017).

It is only a subset of preferences whose fulfilment is relevant to welfare under this theory. In most accounts, the fulfilment of preferences that are excessively "remote" from one's life – such as a person's preference that the next child born anywhere in India survive to adulthood – do not count toward the preferer's welfare (Bykvist 2016). The fulfilment of one's mistaken instrumental preferences may also be considered irrelevant to one's welfare (Adler 2012 at 1526, Hausman 2011 at 100). If I prefer tea over coffee *only* because I incorrectly believe that drinking

[6] Preference can also be defined in other ways, for example as a "comparative evaluation." (Hausman 2011 at 3). The choice-based definition is adopted here because a wide range of individuals (including non-human animals) can have dispositions to choose, even if they cannot necessarily conduct comparative evaluations. Using this definition makes preferentism a broad and capacious constitutive theory of welfare.

tea will eventually give me the ability to fly, then the fulfilment of my preference for tea, arguably, does not make my life better.

3.2 Impossible or Unknowable Life Evaluation

There are four ways in which life-evaluation questions fail to reveal the fulfilment of preferences that would, under a preferentist constitutive theory, be welfare-relevant. First, life-evaluation questions are only posed to human adults who are considered capable of speaking for themselves. These are not the only individuals whose welfare must be considered, under any convincing version of welfare-consequentialism. Children below a certain age might not give intelligible responses to life-evaluation questions, although adult respondents could provide retrospective evaluations of their lives as children (Bykvist 2010, Fabian 2018).[7]

A larger problem is created by non-human animals. Many welfare-consequentialists have concluded that there is no good reason to completely exclude all non-human animals from the "circle of concern" – the group whose welfare should matter to policy-makers. Sentience – the capacity to feel pleasure and pain -- is often asserted as the criterion for a creature's moral significance (Matheny 2006; Singer 2011). Even if it is possible for a philosophically sound welfare-consequentialist policy to disregard the welfare of some "lower order" sentient animals, it might still have to consider the welfare of animals such as primates and dolphins (Johansson-Stenman 2018).

Whether a dolphin or orangutan is capable of evaluating its life is unknown. It might be argued that the concept of life evaluation is only coherent for human beings. Even if non-human animals can evaluate their lives, we cannot, with current techniques, discover what life-evaluation scores they would give. The same is true of adult humans who lack the ability to speak for themselves (for example due to severe disabilities). A purely life-evaluationist welfare-consequentialism would ignore welfare impacts on those whose life-evaluations we cannot ascertain.

3.3 Small Individual Welfare Changes

Life-evaluation questions typically allow (at most) 11 possible responses: the integers between 0 and 10. Confronting respondents with more options (for example, by asking them to

[7] *The Origins of Happiness* uses a child's emotional health (measured through a series of questions to child and parent) to represent the child's well-being (Clark et al 2018 at 153).

respond on a scale of 0 to100) would probably undermine the reliability and ease-of-use of the life-evaluation question, and therefore its practicality (Preston and Colman 2000). As noted above, major life developments are certainly capable of changing one's response on this 11-item scale. However, genuine but small changes in one's welfare are not likely to register.

For this reason, life-evaluationist welfare-consequentialism has no advice to give about the thousands of minor public policy decisions made each year in a modern state. For example, consider a municipality choosing between designs for a public park. Design A includes a soccer field; Design B uses the same space for tennis courts. Welfare-consequentialism has advice to give: it counsels the municipality to choose the option that is most likely to lead to the lives of affected individuals going best for them. However, the choice between designs is unlikely to cause anyone to shift their life-evaluation up or down by a full integer on the 0-10 scale. Even on a 0-100 scale, the design of a single park might not register for even a single individual– or might not register in manner sufficiently consistent to guide policy. It will be suggested below that measuring preference-fulfilment *does* allow coherent welfare-consequentialist policy advice on such decisions.

Some policies that would create net welfare benefits involve costs borne by a small group, and benefits dispersed among a much larger group. For example, suppose a government creates a nature preserve in a forested area that was previously open to logging. This will cause a group of loggers to lose their jobs. The welfare loss that they experience will register on the 11-point life-evaluation scale: unemployment has a powerful negative effect on life-evaluations (Prinz 2013, Neve and Ward 2017). However, a welfare benefit of the policy is that thousands of people will now be able to fulfil preferences for visiting this park. This will probably not cause any of the new park visitors to revise their global life-evaluations upwards by a whole integer on the 0-10 scale. A decision-maker guided exclusively by life-evaluation data would have to ignore this benefit. Section 4.4.1 below argues that measuring preference-fulfilment allows it to be considered.

3.4 The Shape of Lives

Life-evaluation is a "time-slice" measure of individual welfare. A response indicates how someone's life is going, overall, at a particular time in that life. However, welfare-consequentialism seeks not to maximize how well life is going for individuals at any particular moment in time, but rather to maximize the welfare of entire lives (Adler 2007).

It might at first seem that simple arithmetic can create a lifetime welfare measure from time-slice life-evaluation data. An analyst could take the average of all the evaluations that a person would give to all of the time periods in his or her life. Suppose Amina is asked the life-evaluation question once per year throughout her life. She responds "8 out of 10" on half of the occasions, and "6 out of 10" on the other half. Her lifetime welfare figure, according to this approach, would be 7.

However, this makes longevity irrelevant to lifetime welfare. A preferentist would not accept that if Amina dies at age 25 (having evaluated her life as 7 out of 10 every year), her life is just as good as it would be if she dies at age 80 (having also reported 7 out of 10 throughout). Most people have strong and welfare-relevant preferences to live beyond age 25. Ignoring longevity effects has concrete consequences for welfare-consequentialist policy analysis. If the relative value of mental health spending and physical health spending is determined through exclusive reference to their impacts on life-evaluation, then the relative effects of the two spending options on longevity would be disregarded (Veenhoven 2005 at 69).

Some authors propose fixed formulas to combine longevity and life-evaluation into a single measure of lifetime welfare. Veenhoven's "Happy Life Years" measure multiplies the average life-evaluation score in a human population by the average life-expectancy within that population in order to estimate quality of life (Veenhoven 2005 at 70). Bronsteen et al. define lifetime welfare as the sum of the time-slice welfare numbers for all the years of an individual's life (Bronsteen, Buccafusco et al. 2015 at 34).[8] Thus, if Amina lives to 80 and evaluates her life as 8 out of 10 in each year of that life, her lifetime welfare score would be 640. If Amina gives the same life-evaluation reports but dies at age 25, her lifetime welfare score would be only 200.

The problem is that longevity and positive life-evaluation are fundamentally different things. Fixed formulas set the exchange rate between them, with one extra year of life equal to the value of the person's life-evaluation during that year. This has two consequences that might seem unjustifiable to Amina, if they do not align with her preferences. First, a policy reducing the life-evaluation of Amina's first 50 years from 350 (average 7 per year) to 340 (average 6.8 per year) would be considered good for her if the policy were to also give her 6 extra years of life

[8] Note that Bronsteen et al are not pure life-evaluationists, as they would include hedonic elements in their measurement of individual welfare.

after age 100, with an average life-evaluation of only 2 out of 10 during those six years. A welfare-consequentialist analysis that attends to both longevity and life-evaluations must make compromises between the two goods, because the policies that would maximize longevity in a population are not the same as the policies that would maximize life-evaluations. However, it does not follow that policy-makers should impose this particular "exchange rate" between the two.

A second problem is that, under the fixed formula approach of Veenhoven and Bronsteen et al., adding years to Brenda's life can only ever be good for her. This is true even regarding years of severe illness and frailty, which Brenda would evaluate as only 2 out of 10, after having lived a life she evaluated very favourably up to age 85. Again, it seems arbitrary for policy-makers to make this decision about lifetime welfare. It will be suggested below that individuals' preferences regarding longevity, and the extent to which those preferences are satisfied under different policies, must sometimes be directly measured for the purposes of welfare-consequentialist policy analysis.

The point can be extended, because length is only one dimension in the shape of a life. A life has other dimensions that could be relevant to its overall welfare under a preferentist constitutive theory (Campbell 2014). One is slope. A life may improve over time, or go downhill. It might also have a steady quality throughout, as opposed to dramatic peaks and valleys. A policy-maker who assumes that lifetime welfare is the average or sum of the individual's life-evaluations throughout that life will be unable to identify any difference between lives based on the slope or standard deviation.

In conclusion, simple arithmetic transformations of time-slice life-evaluation data into the lifetime welfare numbers required for welfare-consequentialist policy disregard information about the shape of lives that would be relevant under a preferentist constitutive theory. People do not know what shape their lives will have when they are asked life-evaluation questions. Their responses therefore cannot factor in whatever importance they attach to the shapes of their lives.

3.5 Adaptation and Delusion

The phenomena of delusion and adaptation create further problems for life-evaluationism. People answering life-evaluation questions often compare their actual lives to

alternative lives that they can imagine themselves living (Veenhoven 2017). A person who has lived in poverty and isolation all her life may not know that a life of material comfort is possible. If so, her life-evaluation number will be higher than it would be if she were better informed. This may also be true if she knows that other lives are possible, but she has "adapted" to her current life -- convinced herself that she should not hope for or think about lives she would prefer (Sen 2001, Nussbaum 2013). People with disabilities may also adapt in this way to their life situations.

Delusion and adaptation arguably make it misleading to say that Betty (who evaluates her life as 7 out of 10) has just as much welfare as Bob (who also reports 7 out of 10), if Betty is comparing her life to a less attractive set of alternative lives. A preferentist might ask whether both Betty and Bob, with adequate information and sufficient deliberation, would choose the life that Bob is living over the one Betty is living. If they would both do so, because this preference is fulfilled for Bob and not for Betty, Bob has more welfare than Betty does, and their life-evaluations are misleading.

Life-evaluationist welfare-consequentialism would still counsel the government to bring about changes in Betty's life that would make her evaluate her life more favourably. If Betty considers her life to have improved after she gets something that she didn't know existed – or something that she had convinced herself she shouldn't expect – then her changed life-evaluation will reflect that improvement. Delusion and adaptation do not necessarily derail *intra*personal comparisons of welfare – conclusions regarding changes in a single individual's welfare over time (Adler 2019 at 21).

However, they do derail *inter*personal welfare comparisons, and this is problematic for prioritarian forms of welfare-consequentialism. A prioritarian welfare-consequentialist policy analysis requires accurate information about whether Betty's life is actually worse than Bob's. If it is, then her welfare will count for more than Bob's does. Below, I will argue that incorporating preference-fulfilment measures of welfare allows welfare-consequentialism to respond better to situations of delusion and adaptation (section 4.4.2).

4 Subjective Synthesis Welfare-Consequentialism

Life-evaluation provides a practical and coherent account of individual welfare for the purposes of welfare-consequentialist policy analysis, as Part 2 argued. However, there are four ways in which life-evaluation data fails to reflect the fulfilment of preferences that are welfare-relevant, under any plausible preferentist constitutive theory (Part 3). In fact, some of the issues identified in Part 3 are also problematic under other constitutive theories of welfare. For example, the failure of life-evaluationist welfare-consequentialism's to detect any difference between building a well-used soccer field and building little-used tennis courts (section 3.3) would be a problem for many hedonist and objective-list theorists as well as preferentists.

The state has no good reason to presume any constitutive theory of welfare to be false or true. Welfare-consequentialism should therefore use an evidentiary theory of welfare that is as compatible as possible with all of the plausible constitutive theories of welfare. Thus, although life-evaluationist welfare-consequentialism is a good start, it is not good enough for government work.

This Part therefore proposes *subjective synthesis welfare-consequentialism*, which seeks to maximize aggregate welfare measured using both life-evaluation and preference-fulfilment evidentiary theories. Section 4.1 discusses preference-fulfilment measures of welfare. (These are distinct from the preferentist *constitutive* theory of welfare considered in section 3.1). Section 4.2 then shows how data from such measures can be synthesized with life-evaluation data, yielding sounder welfare-consequentialist policy analysis.

4.1 Preference-Fulfilment Measures of Welfare

It is sometimes possible to quantify an individual's welfare based on the extent to which their welfare-relevant preferences are fulfilled. Simply observing individuals' behaviour produces some basic information about their dispositions to choose (their preferences). We observe people eating bananas and not eating dirt, so it is reasonable to conclude that they prefer eating bananas to eating dirt.

Markets may offer more detailed and helpful information about preferences. If certain conditions are met, the prices people choose to pay for different things can inform us about their preferences for those things (Fujiwara 2011). For example, it may be possible to learn

something about people's preferences between bananas and apples by observing the market prices of these two items.

Contingent valuation studies are another source of information about preferences (Carson 2012). People are asked how much money they would be willing to pay to have something they prefer, or how much money they would be willing to accept in exchange for moving away from a state of affairs they prefer. These studies have been used to inform welfare-consequentialist policy analysis, for example cost-benefit analyses of safety regulation and environmental protection (Sunstein 2018 at Chapter 3).

Behavioural observation, markets and contingent valuation studies are sources of information about individuals' preferences, about the relative importance of those preferences to those individuals, and about the extent to which these preferences are fulfilled for different individuals. This information can be used to create quantitative welfare measures. Different methods have been proposed. An individual's *equivalent income*, for example, is their dollar income, adjusted upwards or downwards based on the extent to which that individual's preferences for things money cannot buy are fulfilled (Fleurbaey and Blanchet 2013; Fleurbaey 2016). Alternatively, Benjamin et al (Benjamin, Kimball et al. 2014) propose to measure individual welfare based on the extent to which "fundamental aspects of well-being" are present in an individual's life. The list of aspects, and their weightings, would be determined by survey responses.

4.2 Subjectivity and Normative Parsimony

Preference-fulfilment measures share, with life-evaluation, the virtues of neutrality and deference. They are compatible with multiple constitutive theories of welfare. As Daniel Hausman puts the point, "preference satisfaction can serve as evidence of well-being, regardless of what theory of welfare one accepts" (Hausman 2011 at 88). For example, if more pleasure/less pain is what welfare really is (a hedonic constitutive theory), *and* people prefer to have more pleasure/less pain, then preference-fulfilment measures will track real individual welfare reasonably well.

Both preference-fulfilment and life-evaluation measures are *subjective*, in that they do not count anything as good for an individual unless that individual has a "valuing attitude" toward that thing (Dorsey 2015 at 422). They also both satisfy the requirement that "policies aimed at

bettering people's lives must do so according to the beneficiaries' own standards" (Haybron and Tiberius 2015 at 717). Evaluating your own life favourably is a valuing attitude that applies your own standard; so too is having your welfare-relevant preferences fulfilled (Risse 2012 at 268).

By contrast, other evidentiary theories only measure welfare to the extent that their respective underlying constitutive theories are true. Objective list welfare measures quantify an individual's level of welfare based on whether she has certain resources or capabilities in her life, regardless of whether she has a valuing attitude toward those things (Tiberius and Hall 2010; Hurka 2016). For example, Bhutan's Gross National Happiness measures welfare based on 33 indicators. One of these is "cultural participation." This presupposes a constitutive theory of welfare, because cultural participation is only evidence of welfare if cultural participation itself makes life better. Likewise, hedonic or affective evidentiary theories make an individual's welfare level a function of the pleasures, pains, or other feelings that individual experiences, regardless of the importance the individual attaches to those feelings as a source of welfare (Kahneman, Krueger et al. 2004; Alexandrova 2017 at 159). This is only logical for a state which endorses a constitutive classification of feelings as welfare-enhancing or welfare-reducing.

Normative parsimony is another way to describe the attribute that life-evaluation and preference-fulfilment share, which other welfare measurements lack. To accept an objective or hedonic/affective measurement of individual welfare as a basis for policy decisions, one must be comfortable with the state acting on a "thick," constitutive conception of what actually makes life good (Veenhoven 2005). Those who are comfortable with the state doing so may find this article's argument obtuse -- if life-evaluation is not good enough for government work, why not analyze policy by surveying a whole "dashboard" of objective and subjective welfare measures? (Dolan and White 2007 at 81; Alexandrova and Singh 2018; Treasury of New Zealand 2018)?

A "normative parsimonialist" would respond that it is presumptuous and arbitrary for the state to act as if certain constitutive theories of welfare are true or untrue. Making a full case for subjectivity, deference, and normative parsimony is beyond the scope of this article. However normative parsimony is a basic commitment of both traditional welfare economics and the new school of life-evaluationist welfare-consequentialism. It seems worthwhile to show how,

without abandoning normative parsimony, preference-fulfilment measures can patch life-evaluation's holes.

4.3 Life-Evaluation's Practicality Advantage

If preference-fulfilment can patch life-evaluation's holes, and if it shares life evaluation's virtues of subjectivity and normative parsimony, why bother with life evaluation at all? Why not endorse a "preference-fulfilmentist welfare-consequentialism," which measures welfare exclusively based on the fulfilment of welfare-relevant preferences? The answer is that methodological problems and disagreements of principle have, so far, rendered preference-fulfilmentist welfare-consequentialism impractical for most policy questions.

It has proved very difficult to map preferences, and their fulfilment, in a manner that is coherent and complete enough "for government work." If people pay more for apples than they do for bananas, there are many reasons, apart from preference-strength, why this might be the case (Isoni, Brooks et al. 2016). Data from contingent valuation surveys is often incoherent, especially when the questions pertain to things that the respondents have not personally experienced (Dolan and White 2007; Hausman 2012; Fujiwara 2011 at 22).

Nor is there any consensus about how to quantify individuals' welfare based purely on the extent to which their preferences are fulfilled (van der Deijl 2017). It may be agreed that having more money increases one's ability to fulfil one's welfare-relevant preferences, all else being equal. However the consensus dissolves when it becomes necessary to compromise between fulfilling Joe's preference for more money and fulfilling Joe's preference for better health, or to compromise between Joe's and Jane's respective preferences for more money. The impediments include the tendency of a person's preferences to shift over time, and basic disagreement about what preferences should be considered relevant to an individual's welfare (Dolan and White 2007; Dolan and Peasgood 2008, Hausman 2011 at 72). Van der Deijl (2017) argues that, given the basic theoretical commitments of preference-fulfilment, and the resulting demands for data about individual preferences, this approach is "practically infeasible as a useful tool for policy."

Practicality is the key advantage of life-evaluation relative to preference-fulfilment, as an evidentiary theory of welfare. On major policy questions such as the allocation of national budgets, nothing like the successful life-evaluationist welfare-consequentialist argument for

mental health spending (section 2.2) has ever been accomplished using preference-fulfilment measures. The rough methodological consensus among proponents of life-evaluationist welfare-consequentialism compares favourably to the unresolved debate in the preference-fulfilment camp.

Life evaluation data is more consistent and reliable than contingent valuation data (Diener, Lucas et al. 2009), largely because life evaluation questions are easier for humans to answer than contingent-valuation questions. The average person who has not experienced clinical depression simply cannot say, in a reliable way, how much they would be willing to pay to avoid it. By contrast, notwithstanding the problems identified above, those who are clinically depressed, and those who are not, are able to give reasonably consistent evaluations of their own lives.

Normative policy analysis – ascertaining what government *should* do -- is not just a philosophical exercise. It is (or should be) an essential task for people working in government, as well as people outside government who care about what government does. Life-evaluationist welfare-consequentialism is a practical and workable approach, as Part 2 argued. Life-evaluation is therefore adopted as a starting point for the "subjective synthesis" welfare-consequentialism proposed here. Preference-fulfilment measures are deployed to remedy its deficiencies.

4.4 Synthesizing Two Kinds of Welfare Data

Suppose someone is conducting a welfare-consequentialist analysis of the policy choice between Option A and Option B. This means that she is seeking to identify which of these two policies can be expected to make affected individuals' lives go best, for them, overall. Suppose further that this analyst chooses to use the social welfare function approach. This is a welfare-consequentialist tool, best developed in the work of Matthew Adler, which compares policy options based on expected aggregate lifetime welfare, while attending mathematically to uncertainty and equity considerations. To simplify, the social welfare function analysis can be visualized as a table:

Table 1: Policy Choice using a Social Welfare Function (Simplified)

	Option A	Option B
First affected individual who counts	Number representing expected lifetime welfare of first affected individual if Option A is implemented	Number representing expected lifetime welfare of first affected individual if Option B is implemented
Second affected individual who counts	Number representing expected lifetime welfare of second affected individual if Option A is implemented	Number representing expected lifetime welfare of second affected individual if Option B is implemented
…	…	…
*N*th affected individual who counts	Number representing expected lifetime welfare of *N*th affected individual if Option A is implemented	Number representing expected lifetime welfare of *N*th affected individual if Option B is implemented
Aggregate total score for this option:	Score for Option A	Score for Option B

This table has one row for each individual who counts,[9] and whose welfare is affected by the decision between Policy A and Policy B. The analyst wishes to recommend the policy with the larger "score" in the bottom row. Under a utilitarian social welfare function, the score is simply the sum of the numbers above.[10] Prioritarian social welfare functions aggregate in a more

[9] Regarding the question of whether and how those other than living human constituents of the government should be counted, see section 2.3 above, and accompanying note.

[10] Mathematically, it is expressed as follows:

$$\sum_{i=1}^{N} w(a)$$

Where N = all individuals who count.

complex way, placing extra weight on welfare effects experienced by those with less welfare overall (Adler 2019, Chapter 4).

In terms of Table 1, this paper's argument is that the numbers in the cells should synthesize life-evaluation data and preference-fulfilment data. Together, these two types of data capture *all* of the welfare changes to which welfare-consequentialist policy analysis should attend. The next two sections propose a method for the synthesis.

4.4.1 Where only Preference-Fulfilment Data is Available

If no life-evaluation data is available for a particular cell in the table, preference-fulfilment data should be used instead. This is the case for non-human animals and non-responsive humans (section 3.2, above). A purely life-evaluationist welfare-consequentialism would ignore the welfare of these individuals. However, we *can* gather data about the extent to which their welfare-relevant preferences would be fulfilled under different policy outcomes, and use it to fill in these cells in the Table. Preference-fulfilment measures, unlike life-evaluation measures, do not necessarily require communication: animals' preferences can be ascertained by observing their behaviour. Many leading constitutive theories of animal welfare are preferentist in nature (Rice 2016).

Although the preferences of animals (including human animals) can be contradictory and incoherent, there are ways to make sense of them. For example, experiments can reveal the relative importance of an animal's various preferences – e.g. the relative importance, to egg-laying chickens, of enclosure size and food type. The overall welfare of an animal's life can be estimated based on the extent to which its welfare-relevant preferences are fulfilled. If some of the rows in the Table 1 pertain to individuals whose life-evaluation is impossible or unknowable, then they should be filled in with preference-fulfilment data.

A similar analysis applies to the municipality's decision between a soccer field and tennis courts for its park (section 3.3, above). Life-evaluation questions on an 11-item scale cannot detect the small changes in individual welfare that this decision would cause, but a preference-fulfilment measure can. Observed market prices may be indicative in a case like this

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w(a) means the list of individuals' predicted well-being numbers if policy *a* is adopted. The Greek letter sigma (Σ) means summation. Here, the notation means "sum the lifetime welfare numbers for all of the individuals who count, starting with the number for the first individual and ending with the number for the *N*th individual."

(see section 4.1, above). If people similar to those affected by the decision are willing to pay $X to use private soccer fields in the affected community, and willing to pay $Y to use tennis courts, and the number of users for the two types of facility can be predicted, then the park-designers may be able to identify the option expected to maximize aggregate preference-fulfilment. Situations like this, where people would be asked about similar things they have previously experienced, are also relatively well-suited to contingent valuation surveys. If the policy choice is of this nature, each cell in Table 1 could be filled in with the expected lifetime equivalent income of that individual if that policy option were to be pursued.

4.4.2 Where Both Life-Evaluation and Preference-Fulfilment Data are Available

For other decisions, life-evaluation *could* generate numbers for all of the cells in Table 1, but these numbers would not reflect the fulfilment of some preferences that would be welfare-relevant under a preferentist theory. In such cases, each cell should contain a number incorporating *both* preference-fulfilment and life-evaluation data. As section 3.4 argued, life-evaluation numbers do not reflect the fulfilment of preferences about longevity, because people don't know how long they will live when they answer life evaluation questions. Thus, if a policy choice affects longevity, the number in each cell of Table 1 should reflect *both* that individual's expected life-evaluations *and* the extent to which that individual's preferences about longevity are expected to be fulfilled if that policy is chosen.

Empirical research is necessary to understand the nature and strength of preferences regarding the shape of life. Does everyone prefer to live for as long as possible? Is the preference for additional years of life just as strong regarding the 101st year of one's life as it is regarding the 71st year of one's life (Williams 2013 at 103)? Apart from longevity, are there other dimensions of life-shape (e.g. steady contentment versus peaks and valleys) for which people have welfare-relevant preferences? How much is longevity worth to people, compared to having a life that they would evaluate favourably while living it? Answering these questions would allow a subjective synthesis measure of welfare which improves on life-evaluationist welfare consequentialism. Compared to the *Origins of Happiness* approach, it would bring the allocation of health care dollars closer to the allocation that will make individuals' go best, for them.

Finally, subjective synthesis welfare-consequentialism can use preference-fulfilment measures to more accurately quantify the welfare of those affected by delusion and/or adaptation.

Section 3.5 argued that life-evaluation may generate misleadingly high life-evaluations for such individuals. This distorts the interpersonal comparisons upon which prioritarian welfare-consequentialism relies. Once again, preference-fulfilment measures can patch the holes in life-evaluationism. A properly designed contingent valuation survey might reveal whether certain people have unfulfilled welfare-relevant preferences which, due to delusion or adaptation, are not reflected in their life evaluations (Baber 2017). If so, the numbers used to quantify their lifetime welfare would be revised downwards based on this data.

The argument here is *not* that all public policy decisions should be made by creating something like Table 1, and then filling in every cell according to the subjective synthesis approach. Decision procedures must take account of human capacities. A real municipal council choosing a park design should probably not commission a contingent valuation survey regarding preferences for soccer and tennis. Other ways of spending that money would likely be more welfare-increasing.

The argument here is that the *ideal* policy decision would be the one with the larger score on Table 1, filled in as proposed above. A god-like decision-maker, endowed with the ability to predict all welfare consequences of policies, and unfailingly implement the welfare-maximizing option, should create and follow Table 1. Human decision-makers should come as close as they can to this ideal, given the epistemic and political resources at hand.

4.5 Conclusion

Life-evaluationist welfare-consequentialism is the theory that public policy should seek to maximize individual welfare, measured through responses to life-evaluation questions. This approach has attractive features. It is practical, and it is compatible with state neutrality on the question of what constitutes welfare. Nevertheless, this approach has a significant problem: it does not reflect the fulfilment of certain preferences which, according to at least one major constitutive theory, are highly relevant to individual welfare.

The solution suggested here is to use preference-fulfilment measures to patch these holes. It cannot be claimed that the resulting subjective synthesis welfare-consequentialism tracks real welfare perfectly. However, for a state that seeks to make life go better for everyone – without claiming knowledge about what the good life really is – it offers an approach to measuring welfare which improves on the alternatives.

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