

Commentaries

**AN ECONOMIST'S PERSPECTIVE ON
WELL-BEING ANALYSIS AND COST-BENEFIT
ANALYSIS**CAROL GRAHAM[†]

As a starting point, it is important to note that I come to this from the blunt-tooled perspective of an economist, rather than from the more refined conceptual approach of lawyers. Lawyers take much more time to unbundle underlying conceptual definitions into statements that can pass legal argument. Economists worry much more about translating questions of inquiry into equations which, when run on empirical data, can produce statistically and methodologically rigorous results. Although these two approaches are markedly different, I think there is mutual benefit to be gained from the professions talking more to each other. I surely benefited from reading these excellent articles.

That said, before we can think about sound legal arguments for utilizing these metrics (and the related concepts that they invoke), we should recognize that there is still a lot that we do not know in terms of what we are actually measuring when we discuss well-being. Although we have a clear sense of the various dimensions of well-being and which metrics measure each dimension, there is still an important dimension of well-being that falls into the economist's category of unobservables. Well-being is driven by variables between aspects that are observable, such as socioeconomic and demographic traits, and those that are unobservable, such as innate character traits, genes, and other such things that are difficult to measure. Yet those interactions are fundamental to well-being and to the related behavioral outcomes that we are trying to understand. There is some exciting new work that tries to disentangle the genetic components of well-being from what is determined by the environment,¹ for example,

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1. See, e.g., Jan-Emmanuel De Neve & Andrew J. Oswald, *Estimating the Influence of*

as well as experimental work that compares predicted well-being to actual choice behavior.² Yet even in that work, there are still questions about what the “it” that we are actually trying to measure is. Income, in contrast, is much simpler to define, if also less interesting.

I raise that point as a note of caution in terms of our ability to be as precise as these articles suggest that we should be about the underlying concepts of well-being. The economist’s blunt-tooled approach seeks regularities in large scale data sets and then teases out the precise relationship underlying them, while perhaps falling short on some of the conceptual clarity that lawyers are asking for. This approach has some merit in helping us understand what is still in the realm of the unknown. Well-being is an exciting area precisely because it seeks to define human welfare more broadly than in simple income terms, yet that also raises a gray area where it is less clear exactly what it is we are defining.

That caveat aside, there is a consensus among economists and psychologists studying well-being on its two distinct dimensions—hedonic and evaluative. Indeed, answering the question of how each of these dimensions is relevant to policy and to our national statistics is the task for the new National Academy of Sciences panel (of which I am a member).

Coming from that perspective, I have some genuine criticism of both articles. I disagree with Professor Matthew Adler’s conclusion that only experienced well-being is appropriate for policy,³ and I am concerned that the article by Professors John Bronsteen, Christopher Buccafusco, and Jonathan Masur does not unbundle well-being into its distinct dimensions.⁴ There is good information and analysis in both articles, and I will highlight that in my comments, but I would like to provide a bit more detail on the two dimensions of well-being—and how they relate to policy—first.

The first dimension, hedonic well-being (HWB), which I have

Life Satisfaction and Positive Affect on Later Income Using Sibling Fixed Effects, 109 PROC. NAT’L ACAD. SCI. 19,953 (2012).

2. See, e.g., Daniel J. Benjamin, Ori Heffetz, Miles S. Kimball & Alex Rees-Jones, *What Do You Think Would Make You Happier? What Do You Think You Would Choose?*, 102 AM. ECON. REV. 2083 (2012).

3. Matthew D. Adler, *Happiness Surveys and Public Policy: What’s the Use?*, 62 DUKE L.J. 1509, 1520 (2013).

4. John Bronsteen, Christopher Buccafusco & Jonathan S. Masur, *Well-Being Analysis vs. Cost-Benefit Analysis*, 62 DUKE L.J. 1603 (2013).

categorized in past work as “Benthamite,” is related to the environment or context in which people live—the quality of their jobs, their immediate state of health, the nature of their commute to work, and the nature of their social networks—and is reflected in positive and negative affective states, among other things.⁵ Daily experience is linked to health status and other outcomes via channels such as worry and stress on the one hand, and pleasure and enjoyment on the other.⁶

How people think about and evaluate their lives as a whole, as measured by evaluative well-being (EWB) metrics, reflects a more global, life-course view and is likely also to be related to longer-term behaviors, such as investments in health and education.⁷ This dimension of well-being, which in previous work I have roughly categorized as “Aristotelian,” implicitly encompasses a eudemonic component such as the extent of purpose and meaning that people derive from their jobs, their relationships, and their lives.⁸ It is, in my view, inherently related to the opportunities that people have to exercise choice and to pursue fulfilling lives.

The dimension of well-being that survey respondents emphasize or value most may be mediated by their agency and capacity to control their lives. Professors Daniel Kahneman and Angus Deaton, for example, find that income correlates much more closely with EWB than with HWB in the United States.⁹ The correlation between HWB and income tapers off at roughly \$75,000 or roughly median income for the U.S., but the correlation between income and EWB continues in a linear fashion.¹⁰ After a certain point, more income cannot make people enjoy their daily lives more (although

5. CAROL GRAHAM, *THE PURSUIT OF HAPPINESS: AN ECONOMY OF WELL-BEING* 33, 36 (2011). As I note there, my characterization of HWB as “Benthamite” is perhaps itself characteristic of “a rogue economist delving into the philosopher’s world.” *Id.* at 33.

6. *Id.* at 42–44.

7. *See id.* at 56 (“[S]hort-term frustration or delayed gratification often is necessary to complete certain goals . . . , and the negative experience component [of well-being] is likely outweighed by the overall contribution that achieving such goals makes to well-being in a life evaluation sense.”).

8. *Id.* at 33.

9. *See* Daniel Kahneman & Angus Deaton, *High Income Improves Evaluation of Life but Not Emotional Well-Being*, 107 *PROC. NAT’L ACAD. SCI.* 16,489, 16,492 (2010) (“[I]ncome is more strongly related to satisfaction than to happiness . . .”).

10. *See id.* at 16,491 (“[B]eyond about \$75,000/y, there is no improvement whatever in any of the three measures of emotional well-being. In contrast, . . . [there is] a fairly steady rise in life evaluation with log income over the entire range [of incomes].”).

insufficient income is clearly linked to suffering and negative moods), but higher levels of income offer people many more choices about how to live and what to do with their lives.¹¹

Similarly, Eduardo Lora and I find that the most important variables to the reported life satisfaction of the “poor” in Latin America (which we define as survey respondents living in households with below-median household income), after having enough food to eat, are having friends and family to rely on in times of need.¹² In contrast, the most important variables to the life satisfaction of the “rich” (which we define as respondents above the median income) are work and health.¹³ It is likely that friends and family are the vital safety nets that make daily life tolerable for the poor, whereas work and health provide wealthier respondents with the agency to make choices in their lives.¹⁴

Individuals who focus primarily on daily experiences—due to low expectations, lack of agency, or imposed social norms—may have less incentive to invest in the future.¹⁵ In rapidly growing developing economies, I find *lower* levels of reported EWB among respondents with high levels of income mobility than among very poor rural respondents with no mobility or future prospects of such.¹⁶ In the United States, I find that the obese have lower levels of EWB than the nonobese, but that the negative well-being effects are mitigated if they are in high-obesity cohorts. High-obesity cohorts also have lower levels of income mobility, meanwhile.¹⁷ It seems that people are better able to adapt to unpleasant certainty and retain relatively high levels of well-being (and likely higher in the HWB dimension than in the EWB dimension) than to live with uncertainty, even that which is

11. *See id.* at 16,492 (“More money does not necessarily buy more happiness, but less money is associated with emotional pain. Perhaps \$75,000 is a threshold beyond which further increases in income no longer improve individuals’ ability to do what matters most to their emotional well-being, such as spending time with people they like, avoiding pain and disease, and enjoying leisure.”).

12. GRAHAM, *supra* note 5, at 37–38, 48.

13. *Id.* at 48.

14. *See id.* at 49 (“The findings on the importance of work and health to the well-being of the rich and the importance of friendships to the well-being of the poor in Latin America are illustrative . . . [of the fact that] people may . . . emphasize different dimensions of happiness more because of what they are capable of—for example, agency—and in part because of inherent character traits.”).

15. *Id.* at 43.

16. *Id.* at 57–61.

17. *Id.* at 43–44.

associated with progress.¹⁸

Individuals who have a longer-term focus and are more achievement oriented, meanwhile, may at times sacrifice daily experiences for longer-term objectives and anticipated EWB in the future.¹⁹ Extreme manifestations of this sacrifice include those who choose to migrate to another country to provide their children with opportunities, and those who choose to participate in social unrest for a broader societal objective.²⁰ My initial research with Julie Markowitz based on intent-to-migrate data from Latin America shows that these more extreme behavioral choices are associated with lower ex-ante levels of well-being (EWB and HWB).²¹

Indeed, an important and less well-understood aspect of well-being is its causal properties. Some research suggests that higher levels of well-being are, on average, linked to positive behavioral outcomes, such as healthier living and better performance in the labor market.²² But this work is in its initial stages. Equally important, the two distinct dimensions of well-being may have distinct unobservable dimensions and very different causal properties. As such, the different measures will drive different policy choices and design. Policies designed to enhance HWB, such as quality of living at the

18. See Carol Graham, *Adaptation Amidst Prosperity and Adversity: Insights from Happiness Studies from Around the World*, 26 WORLD BANK RES. OBSERVER 105, 132 (2011) (“Understanding that, on average, adapting to unpleasant certainty is easier than adapting to less unpleasant uncertainty can help explain opposition to policy reforms in contexts which seem intolerable and in dire need of change by most external assessments.”); Carol Graham, Lucas Higuera & Eduardo Lora, *Which Health Conditions Cause the Most Unhappiness?*, 20 HEALTH ECON. 1431, 1443–44 (2011) (“Our findings highlight the importance of conditions associated with uncertainty over those of mobility and self-care. . . . Individuals seem better able to adapt to one-time health shocks—such as a loss in mobility—than they are to conditions which are associated with uncertainty, such as anxiety and pain.”). See generally Carol Graham, *Happiness and Health: Lessons—and Questions—for Public Policy*, 27 HEALTH AFF. 72, 83–85 (2008).

19. See GRAHAM, *supra* note 5, at 44–45 (“Highly driven ‘type A’ personalities may enjoy the events of each day less but get more satisfaction out of their overall life . . .”).

20. *Id.* at 23–24.

21. See Carol Graham & Julie Markowitz, *Aspirations and Happiness of Potential Latin American Immigrants*, J. SOC. RES. & POL’Y, Dec. 2011, at 9, 14 (“[T]hose with intent to migrate assess their present economic situation . . . lower relative to those who do not express interest in migrating. . . . [P]otential immigrants also report lower happiness levels generally compared to non-immigrants.”).

22. See *supra* note 1, at 19,954; Ed Diener & Micaela Y. Chan, *Happy People Live Longer: Subjective Well-Being Contributes to Health and Longevity*, 3 APPLIED PSYCHOL.: HEALTH & WELL-BEING 1, 32–33 (2011); Carol Graham, Andrew Eggers & Sandip Sukhtankar, *Does Happiness Pay? An Exploration Based on Panel Data from Russia*, 55 J. ECON. BEHAV. & ORG. 319, 337–40 (2004).

end of life, are very different from those aimed at enhancing EWB, such as the education and opportunities of youth, for example.

If daily experiences are negative enough, meanwhile, they might overturn objectives of policies that are designed to enhance longer-term opportunities and well-being. George Akerlof cites research on kids in gangs in New York City who receive scholarships to go to top boarding schools.²³ Yet these students do not fit in at the new schools when they go, and they find the experience so unpleasant that they drop out.²⁴ When these students return home, however, they no longer fit into their home environments.²⁵ The negative daily experiences eventually determined the long-run outcomes.²⁶ My own research on happy peasants versus upwardly mobile, frustrated achievers—whose lives are rather unpleasant on a daily basis but are progressing out of poverty into lives with a fuller opportunity set—is relevant here because it highlights the extent to which the process of making progress or change can be a very unpleasant experience.²⁷ Having both sets of metrics is important because a lack of understanding of the HWB effects of certain policies could result in failure before they achieve longer-term objectives.

Both of the articles provide a discussion, from a legal perspective, of how or if well-being metrics can contribute to policy questions and decisions. The Adler article is more skeptical and provides a number of compelling reasons for the need to be cautious about EWB in the policy arena, while for the most part endorsing the usage of HWB metrics.²⁸ The Bronsteen, Buccafusco, and Masur article is more of an endorsement of well-being metrics in general, and it assesses them more favorably than cost-benefit analysis (CBA) in a number of areas.²⁹ Although I accept many of the good points in both articles, I neither agree with Adler that the flaws of EWB metrics are sufficient to dismiss them from the policy arena, nor do I

23. GEORGE A. AKERLOF & RACHEL E. KRANTON, *IDENTITY ECONOMICS: HOW OUR IDENTITIES SHAPE OUR WORK, WAGES, AND WELL-BEING* (2010).

24. *Id.*

25. *Id.*

26. *Id.*

27. See GRAHAM, *supra* note 5, at 22–23. (“[R]espondents in countries with higher growth rates were, on average, less happy than those in countries with lower growth rates One explanation . . . is found in the increases in instability and inequality that often accompany economic growth booms.”).

28. Adler, *supra* note 3, at 1599–1600.

29. Bronsteen, Buccafusco & Masur, *supra* note 4, at 1615.

believe that a blanket endorsement of well-being metrics, without distinguishing between the two dimensions, as in the case of Bronsteen, Buccafusco, and Masur, is sufficient.

Professor Adler's excellent article *Happiness Surveys and Public Policy: What's the Use?* does a good job of critiquing economists for their lack of rigor in handling normative concepts, such as well-being, preference satisfaction, and utility, and, as such, having insufficient engagement with philosophy.³⁰ I accept that criticism and learned from the article. Professor Adler does a good job of distinguishing between preference-based and experience-based accounts of well-being,³¹ definitions that roughly correlate with the evaluative and hedonic concepts that I raise above. Preference-based well-being goes beyond daily experiences and includes preferences for items such as goals, knowledge, and purpose, which extend beyond individuals' daily experiences.³² This is exactly what we attempt to measure with evaluative metrics.

Indeed, it is this eudemonic component of well-being that we know the least about (and is the subject of my newest research). It is also possible, as I suggested above, that increasing this dimension of well-being may require lowering HWB, at least in the short term (as in the case of studying for the bar, for example). Professor Adler criticizes the scholars in the field for not having spent enough time investigating the relative importance that individuals attach to each of these dimensions.³³ I would argue that disentangling which dimension of well-being survey respondents most emphasize is precisely where

30. Adler, *supra* note 3, at 1560–63 (discussing econometric methodology and arguing that, among other things, “the flaw in this strategy—well-recognized by many economists in the SWB literature—is that there may be unobserved individual-specific factors that both cause variation in stated SWB and cause (or otherwise are correlated with) the attributes [of an individual at a particular time]”).

31. *See id.* at 1521 (“A key distinction is that between *experientialist* and *nonexperientialist* conceptions of well-being. A preference-based conception of well-being falls in the nonexperientialist category because an individual can hold an intrinsic preference for items other than her own experiences.”).

32. *See id.* at 1519 (“[O]n a standard preference-based account of well-being, the *fundamental arguments* for an individual's preferences—what she intrinsically prefers and disprefers—might well include items external to her mind, such as her physical health, her accumulation of material goods, her freedom and autonomy, her accomplishments, and so forth.”).

33. *See id.* at 1536 (“The SWB literature regularly blurs the line between preference-realization (on the one hand) and feelings of satisfaction or beliefs regarding preference-realization (on the other), and to the related point that individuals can have intrinsic preferences for items other than their own mental states.”).

the most new and exciting research is focused today, including by Professor Paul Dolan, an economist who Professor Adler cites and with whom he has co-authored.³⁴ I agree with Professor Adler that we need to know more about this question, and it is precisely this area that I cite above as the gray, unobservable area that we know the least about conceptually. At least initially, we may have to tease out answers from empirical work, including experiments.

This is a fundamental critique and one that my profession needs to respond to in much greater detail. I applaud Professor Adler for his eloquent discussion along these lines. I disagree with him, though, that hedonic well-being measures are the only ones that we can use for policy.³⁵ Because they are limited to daily experience, they miss precisely the gray and unknown area that is what, in the end, well-being metrics can help us better understand about human welfare. This includes questions such as what drives people's quest for purpose, opportunity, and achievement, and why these things vary across individuals. Professor Adler's Mr. Cheery versus Mr. Grumpy example in the article speaks to this very point.³⁶

Professor Adler makes a number of other points, for example, about scale heterogeneity, mood effects, and ordinality versus cardinality.³⁷ It would be beyond the scope of this commentary to go into each of these in detail. Yet I would like to make the case here that we know enough about these problems to be able to correct for them methodologically. We can, for example, test different scales and adjust for bias, test for mood effects, and run ordinary least squares and ordered probit or logit regressions side by side and show that the results, one imposing cardinality and the other not, yield identical results.

There is one way, meanwhile, that Professor Adler's and my

34. See, e.g., Matthew Adler & Paul Dolan, *Introducing a "Different Lives" Approach to the Valuation of Health and Well-Being* 11 (Kenan Inst. for Ethics at Duke Univ., Working Paper No. 5, 2012).

35. See Adler, *supra* note 3, at 1520 ("The weak EQ defense is by far the most plausible basis for incorporating SWB data into policy analysis.").

36. See *id.* at 1592-93 ("Cheery is upbeat, but forgets much of what happens to him, and his stock of propositional knowledge is pretty mediocre. Grumpy goes through daily life in an affective state that is at or slightly below neutral, but he is keenly focused on the sights and sounds around him, can recollect his past in rich detail, and has educated himself in various fields. Assume, further, that Cheery and Grumpy are more or less the same in their objective characteristics (income, health, job status, social life). Is it clear that Cheery lives a better life than Grumpy? Hardly.").

37. *Id.* at 1549-60.

views might be more closely aligned. His argument suggests that well-being metrics would be the sole basis for making policy decisions and, as such, holds them up to a bar of conceptual clarity and precision in measurement that we may never achieve (nor, I would argue, that income metrics have been able to achieve).³⁸ Using this bar, the hedonic metrics are much more precise because what they seek to measure is conceptually simpler. Yet most scholars who are studying well-being metrics in the policy arena focus on how well-being metrics can inform policy decisions *at the margin*, as complements to, rather than substitutes for, existing metrics of welfare.³⁹ In this instance, some of his concerns about the unanswered conceptual issues in EWB, although still relevant, would be less consequential.

The second article, authored by Professors Bronsteen, Buccafusco, and Masur and entitled *Well-Being Analysis vs. Cost-Benefit Analysis*, compares CBA based on contingent valuations to analysis of the same questions based on well-being metrics.⁴⁰ The authors make a good case that well-being metrics are able to overcome many problems, such as the ability to survey actual reported well-being in real time, rather than using data based on hypothetical future choices.⁴¹ I very much agree with that.

I also agree with the authors that it is much more difficult to manipulate well-being data than the critics assume.⁴² With a properly designed and implemented well-being survey, respondents do not know that their well-being response is being matched with any environmental or policy condition or question.⁴³ Instead, their reported well-being is the first question in the survey, and it is matched to those of similar respondents based on all of the usual socioeconomic and demographic controls. We can then assess the differentials in well-being across these respondents, who are driven by different health, environmental, or policy conditions, such as whether

38. *See id.* at 1518 (“A more precise and nuanced engagement with different possible conceptions of well-being is needed.”).

39. GRAHAM, *supra* note 5, 106–07, 111.

40. *See generally* Bronsteen, Buccafusco & Masur, *supra* note 4.

41. *Id.* at 1655 (“[R]evealed-preference studies suffer from an additional incurable flaw, one that WBA does not share. The flaw is that they rely upon affective forecasting: the prediction of how an individual will feel about an event or a condition before it happens.”).

42. *See id.* at 1632 (“[T]he types of highly charged political issues that might cause individuals to manipulate well-being surveys would also cause them to manipulate well-being surveys would also cause them to manipulate contingent valuation surveys, possibly to greater effect.”).

43. *Id.*

they smoke, live with contaminated air, or with more or less inflation, for example.⁴⁴ As such, their answers cannot be easily manipulated by politicians.⁴⁵

Although I agree with the article's critique of forecasting and discounting errors in contingent valuations, I would also highlight the limitations of well-being metrics in addressing intertemporal issues. HWB metrics, for example, measure happiness today, whereas EWB metrics in theory measure happiness over the life course. But there is a lot of unknown territory as we analyze responses. When people assess their lives as a whole, are they considering simply their own or also their children's well-being, for example? One can imagine quite different conditions satisfying the former over the latter.

My main critique of the article, though, is that it gives insufficient attention to the differences between EWB and HWB. For example, the authors cite Professors Kahneman and Deaton's 2010 article as finding that money only matters to well-being up to median income.⁴⁶ Kahneman and Deaton's finding is two-fold, however. They find that the relationship between income and HWB tapers off at median levels of income, but, in contrast, the correlation between income and EWB is a linear one up to the highest levels of income.⁴⁷ My view is that the discrepancy is because the income variable captures opportunities and ability to make the choices that determine higher levels of EWB. Good moods and daily experiences, meanwhile, are not enhanced by higher levels of income once essential needs are met.⁴⁸ The authors' comparison of well-being and CBA would greatly benefit from distinguishing between the two dimensions of well-being and what they measure.

I learned a great deal from both articles, and each will help us think through the very difficult challenges of applying these new concepts and metrics to the measurement of human welfare. And they will also, I hope, contribute to more collaboration between lawyers and economists in the future.

44. *Id.*

45. *Id.*

46. *Id.* at 1620.

47. Kahneman & Deaton, *supra* note 9, at 16,491–92. For full disclosure, I was the main reviewer for Kahneman and Deaton's article.

48. See GRAHAM, *supra* note 5, at 16–17 (“On average, wealthier countries (as a group) are happier than poor ones (as a group); happiness seems to rise with income up to a certain point, but not beyond it. . . . [A]fter basic needs are met, factors other than income . . . become increasingly important.”).