Comments on David Blanchflower, David Bell, Alberto Montagnoli, and Mirko Moro, "The Effects of Macroeconomic Shocks on Well-being"

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For the purposes of full disclosure, I admit to being one of the early outliers that began working on happiness economics and well-being over a decade ago. I am thus continually intrigued by the range of questions that the approach is now being applied to.[1] The latest is in the legal domain, where lawyers are now considering well-being metrics as the basis for contingency valuations – which takes me from intrigue to worry! Perhaps happiness economics has gone too far? In contrast, the question that is the subject of the conference and of the paper by Danny and his co-authors is a natural one for the metrics and the approach, and a good example of the kind of policy question where a new approach can broaden our thinking. Thus my comments reflect my reactions to the substance of the paper, but also an interest in what the approach can contribute to the more general topic.

This is a great paper. It adds new thinking to the standard discussions about macro-economic policy, and at the same time contributes to the literature on well-being in economics. Specifically, it provides a methodological contribution by combining the unemployment rate and the coefficient on individual unemployment together into one measure of the aggregate, societal level costs of unemployment, and adding it to the standard misery index. Most previous work has simply compared the coefficients on the unemployment and inflation rates, holding individual unemployment constant, but has not factored in the relative costs at the individual level into any kind of aggregate assessment. I think this is a very nice innovation.

A central finding of the paper, meanwhile, and also a novel one, is that while most publics in the sample are bothered more by unemployment than by inflation, in a small number of "inflation hawk" countries, where governments and government rhetoric focus much more on inflation (and for the most part unemployment rates are lower), concerns about inflation dominate the well-being effects.

Perhaps not coincidentally, in our work on Latin America in the late 1990's, a time period when many countries had undertaken serious macroeconomic reforms designed to combat high or hyper levels of inflation, concerns about inflation dominated the well-being effects (our unemployment rate coefficient was insignificant, that on the inflation rate were significant and

[1] While happiness is the colloquial term that gets the most attention, and, used inter-changeably with life satisfaction in the early surveys and work in this area, the over-arching concept that is now commonly used is well-being, which can, in turn, be unbundled into distinct dimensions (discussed below).

negative).[2] Public concerns about inflation were heightened due to recent experience in many countries. At the same time, the same countries were characterized by high levels of informal employment, which reduces the relevance of the formal unemployment rate for much of the labor force. In the case of the findings of Danny's paper, the issue of unemployment is paramount in the public mind in most of the European countries in his sample and time frame, while inflation is an issue (in terms of well-being) only in a small sub-set of better performing economies.

I agree with Danny's assessment of well-being metrics and what they can contribute to these questions. Yet I would even make a stronger case for why the surveys are a particularly good method in this case. First, revealed preferences just don't tell us much about individual preferences in contexts of macroeconomic or institutional arrangements that individuals are powerless to change. In such contexts, it is very difficult to reveal a preference. Voting, for example, does not occur often enough nor is it a clear enough choice to count as a revealed preference, as many factors other than macroeconomic policy choices drive voter behavior. In my view, well-being surveys comprise one of the best tools that we have available to examine the differential welfare effects of macroeconomic or institutional arrangements.

Danny cites the results of Shiller's (1997) cross-country research on opinions about inflation, which provides very important findings about the reasons that inflation bothers people. Yet these surveys are less methodologically robust for assessing the aggregate welfare effects of inflation, precisely because they frame the questions/concerns for the respondent. The typical respondent may have thought very little about the phenomenon in question, for example, until he or she is asked, and that, in turn, tends to heighten concerns about it (be it inflation, inequality, or corruption, for example).

Well-being research in this area is not based on asking respondents if they are concerned about inflation or unemployment or any other particular phenomenon. Instead reported individual well-being is the dependent variable, and, after controlling for a range of standard socio-economic and demographic variables, we can add variables of interest that vary across countries, regions, or towns, such as inflation and unemployment rates, inequality, environmental quality, or the like. We then assess the effects of these things on similar individuals while varying the levels of inflation and/or unemployment, for example, without asking them direct questions about the phenomena.

Micro-econometric happiness equations have the standard form:

$$W_{it} = \alpha + \beta x_{it} + \varepsilon_{it}$$

[2] Carol Graham and Stefano Pettinato, "Frustrated Achievers: Winners, Losers, and Subjective Well-being in New Market Economies", *Journal of Development Studies*, Volume 38, No. 4, April 2002.

W is the reported well-being of individual *i* at time *t*, and *X* is a vector of known variables including socio-demographic and socioeconomic characteristics. Unobserved characteristics and measurement errors are captured in the error term. Because the answers to happiness surveys are ordinal rather than cardinal, they are, in theory, best analyzed via ordered logit or probit equations. In practice, OLS specifications yield essentially identical results, allowing for comparisons across the coefficients, which is the basis of the approach that Danny and his co-authors take in calculating the relative weights of inflation and unemployment in the misery index.[3]

While the focus of the paper is on the misery index and the costs of inflation and unemployment, the Easterlin paradox, which Danny and co-authors cite on page 9, provides an important frame for the discussion. The paradox is that after a certain level of wealth, income growth in wealthier countries is not consistently correlated with happiness. My colleagues and I actually find a "paradox of unhappy growth" in addition: using Gallup World Poll data from around the world and controlling for per capita *levels* of GDP, which are positively correlated with happiness, respondents in countries with higher rates of growth are less happy than those with lower rates.[4] The finding is primarily driven by middle income developing countries, where rapid growth is typically accompanied by increasing inequality and the insecurity associated with changing rewards to different skill sets. Danny and colleagues also cite research showing that macroeconomic volatility undermines well-being, a finding which runs in the same direction. This is an example of how these metrics can shed light on how macroeconomic trends can affect well-being in ways that traditional measures do not capture.

There is a lot of debate about the Easterlin paradox among economists. One thing the debate overlooks, though, is the extent to which the paradox is explained by the dimension of well-being is being measured. There is increasing consensus among those involved in this new "science" of well-being on its two distinct dimensions. One is hedonic well-being (HWB) – e.g. how people experience their lives on a daily basis, which is assessed by their momentary or daily moods (positive and negative), and implicitly captures their quality of life. The other is evaluative well-being (EWB) – e.g. how people think of their lives as a whole, a dimension which implicitly includes the opportunities that people have and their purpose or meaning in life (eudemonia). More framed well-being questions, which capture evaluative well-being and its relative dimensions (such as comparisons to the best possible life) correlate much more closely with per capita income than do open ended happiness or hedonic well-being questions, and thus

[3] For more on the approach, see Carol Graham, "The Economics of Happiness" in Larry Blume and Steven Durlauf, eds., *The New Palgrave Dictionary of Economics*, 2nd edition, 2008.
[4] Graham and Lora (2009).

different conclusions can be drawn about the Easterlin paradox simply because of the particular question that is used in the analysis.[5]

Research by Daniel Kahneman and Angus Deaton in the U.S., and by Eduardo Lora and myself in Latin America, finds that evaluative well-being correlates much more closely with income than does hedonic well-being.[6] Evaluative well-being captures people's opportunities and ability to make choices over the direction of their lives, and these dimensions of well-being are enhanced by having higher levels of income. In contrast, while being destitute is bad on all fronts of well-being, after a certain amount of income, more money will not make you have better moods, enjoy your friends more, or dislike your commute less. These distinctions matter not only to what studies based on different metrics conclude about the Easterlin paradox, but also to assessments that are made about the well-being costs of unemployment and unemployment rates.

The literature on well-being finds that unemployment is one of the most deleterious things for individual well-being. Indeed, while people can experience all sorts of negative events – divorce, mobility problems, etc. - and adapt back to their equilibrium levels of well-being, research by Andrew Clark and colleagues finds that long-term unemployment is one of the few things that individuals do not adapt back from. Indeed, the psychological scarring seems to affect their future labor market possibilities.[7] Related research finds that the well-being effects of unemployment are *lower* in contexts where unemployment rates are *higher*.[8] A standard economics interpretation would be that the unemployed *should* be unhappier with higher rates because their probability of becoming re-employed is lower. Yet it turns out that the stigma effects of being unemployed when most of one's cohort is employed (and has choices and opportunities) dominate, at least for reported well-being. One can also imagine that the unemployed will have higher levels of hedonic well-being (and better quality of life) if they feel less stigmatized and have other unemployed colleagues to socialize with.

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[5] See Carol Graham, Soumya Chattopadhyay, and Mario Picon, "The Easterlin and Other Paradoxes: Why Both Sides of the Debate May Be Correct" in Ed Diener, John Helliwell, and Daniel Kahneman, eds., *International Differences in Well-Being* (Oxford: Oxford University Press, 2010).

[6] Daniel Kahneman and Angus Deaton (2010), "High Income Improves Evaluation of Life But Not Emotional Well-Being", *Proceedings of the National Academy of Sciences*, 10011492107, August 4; and Carol Graham and Eduardo Lora (2009), *Paradox and Perception: Measuring Quality of Life in Latin America* (Washington, D.C.: The Brookings Institution).

[7] Andrew Clark, Y. Georgellis, and Paul Sanfey (2001), "Scarring: The Psychological Impact of Unemployment", *Economica*, 68, pp.221-41.

[8] Andrew Clark and Andrew Oswald (1994), "Unhappiness and unemployment", *Economic Journal* 104; Andrew Eggers, Clifford Gaddy, and Carol Graham (2006), "Well-being and unemployment in Russia in the 1990's: can society's suffering be individuals' solace?" *Journal of Socioeconomics*, January; and Alois Stutzer and Rafael Lalive, 2004. The role of social work norms in job searching and subjective well-being, *Journal of the European Economic Association* 2.

Recent work of mine with Milena Nikolova, based on the Gallup World Poll, finds that being employed full time has a strong and positive correlation with evaluative well-being, but a negative correlation with hedonic well-being.[9] Employment status is, of course, integrally related to the opportunities and capacity to make choice that people have, which is good for the evaluative dimension of well-being, but can also increase stress and worry, among other things, at the same time, which is exactly what we find.

Given the centrality of employment status to individual well-being (in both dimensions) it should be no surprise that Danny and co-authors find that in most places in Europe, particularly where unemployment is high, respondents value unemployment more than inflation. They also find that the cohorts that are most negatively affected by unemployment rates are women, the less educated and the old. These cohorts may also be the most precariously employed (assuming these old people are indeed employed). Our research on unemployment in Russia finds that precariously employed cohorts are the ones that are most sympathetic to their unemployed colleagues.[10]

Another very nice component of the paper is the focus on the well-being effects of banking crises. The authors find that these crises have significant negative effects on well-being *above and beyond* those of the direct crisis-driven unemployment rates, across countries and over time. Our research also finds that crises are very bad for well-being.[11] In work based on daily, nationally representative data for the U.S. from Gallup for 2008-2010, we find dramatic drops in well-being during the onset of the crisis. National average well-being fell by 11 percent in the six months following the Leman Brothers collapse. As soon as the uncertainty stopped and the bottom stopped falling out of the stock markets, however, well-being levels recovered and even surpassed their pre-crisis levels. [See Figure 1]

As a benchmark for the magnitude of these trends, it is worth noting that national average happiness did not increase at all in the U.S. during three decades of relatively rapid growth. Rather interestingly, the well-being levels of those respondents who were already unemployed, at levels which were already lower than the average, remained much lower throughout the crisis and well into the recovery. [See Figure 2] We also found that these same respondents were much less responsive to events that were clear markers of both crisis and recovery, suggesting that they simply had either less awareness or less to lose or gain with changes in the markets.

One of the most important ways in which crises affect well-being is the uncertainty that is associated with them. People worry about how much they will lose. The behavioral economics

[9] Carol Graham and Milena Nikolova (2013), "Happy Peasants and Frustrated Achievers: Agency, Capabilities, and Well-being", Mimeo, The Brookings Institution, Washington, D.C.
[10] Eggers, Gaddy, and Graham (2006).
[11] Carol Graham, Soumya Chattopadhyay, and Mario Picon (2010), "Adapting to Adversity: Happiness and the 2009 Crisis in the United States, *Social Research*, Vol. 77, No. 2, Summer.

literature shows that people value losses disproportionately to gains.[12] As such, crises heighten fear of unemployment even among the employed. Our findings in the U.S. show a clear rise in concern about firing in the workplace with the onset of the 2008-2009 crisis, and those respondents who report to be in firms that are firing people are at least a half point lower on the subjective well-being scale than are those who are in firms that are not firing people.[13] [Figure/Table 3] When we look across the EU 27 countries and also Croatia, Iceland, Norway, and Turkey for the years 2007-2012, meanwhile, we find that the well-being levels of those respondents who report that it is a bad time to find a job in their city or country are significantly lower than those who do not. (As it is cross section data, we cannot, of course, establish the direction of causality). [Figure/Table 4] Our findings on fear of unemployment in Latin America find that such fear is typically higher among the precariously employed and among respondents in big cities. The latter respondents are more likely to rely on formal job markets and to be vulnerable to macroeconomic volatility than are their rural and small town counter-parts.[14]

The issue of uncertainty and fear of unemployment related to crises, which is certainly relevant to Europe in the time period that Danny and colleagues cover, brings me to one thing that I think they could add to their paper. They could measure fear of unemployment directly, and see how it varies both across their countries of interest and also over time – e.g. before, during, and after the banking crises. They could then compare trends in fear of unemployment to the misery index and see if they are correlated and/or co-move. This would be an additional way to assess the society-wide well-being costs, complementing the misery index, as fear of unemployment and unhappiness are highly correlated (indeed, less happy people are more likely to fear unemployment – hard to establish causality in a cross section on this, unfortunately).

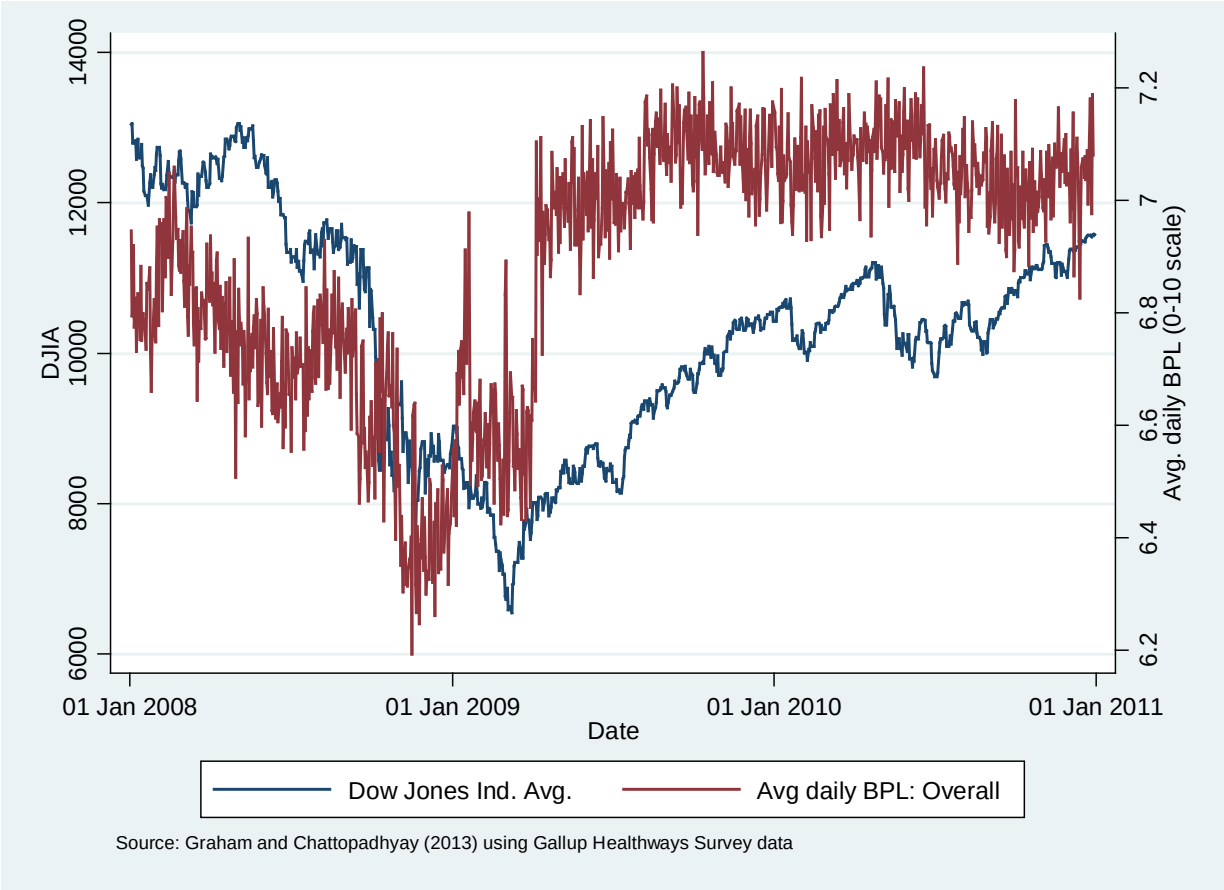
In sum, though, this is an excellent paper which brings new empirical insights and also new tools for measuring the welfare effects of macro-economic shocks to the policy table and discussions. It builds from a burgeoning literature on the well-being effects of a range of policy-relevant factors, and contributes new research as well as methodological innovation to that literature as well as to the policy discussion. I benefited a great deal from reading it.

[12] See the seminal work by Daniel Kahneman and Daniel Tversky (1979), "Prospect Theory: An Analysis of Decision Under Risk", *Econometrica*, Vol. 47, No.2.

[13] In 2008, mean scores on the best possible life question in the Gallup Daily US poll were 6.8570 for those in firms that were not firing people and 6.2981 in those firms that were firing; in 2010 those numbers were 6.7932 in the firing firms and 7.2502 in the non-firing firms.

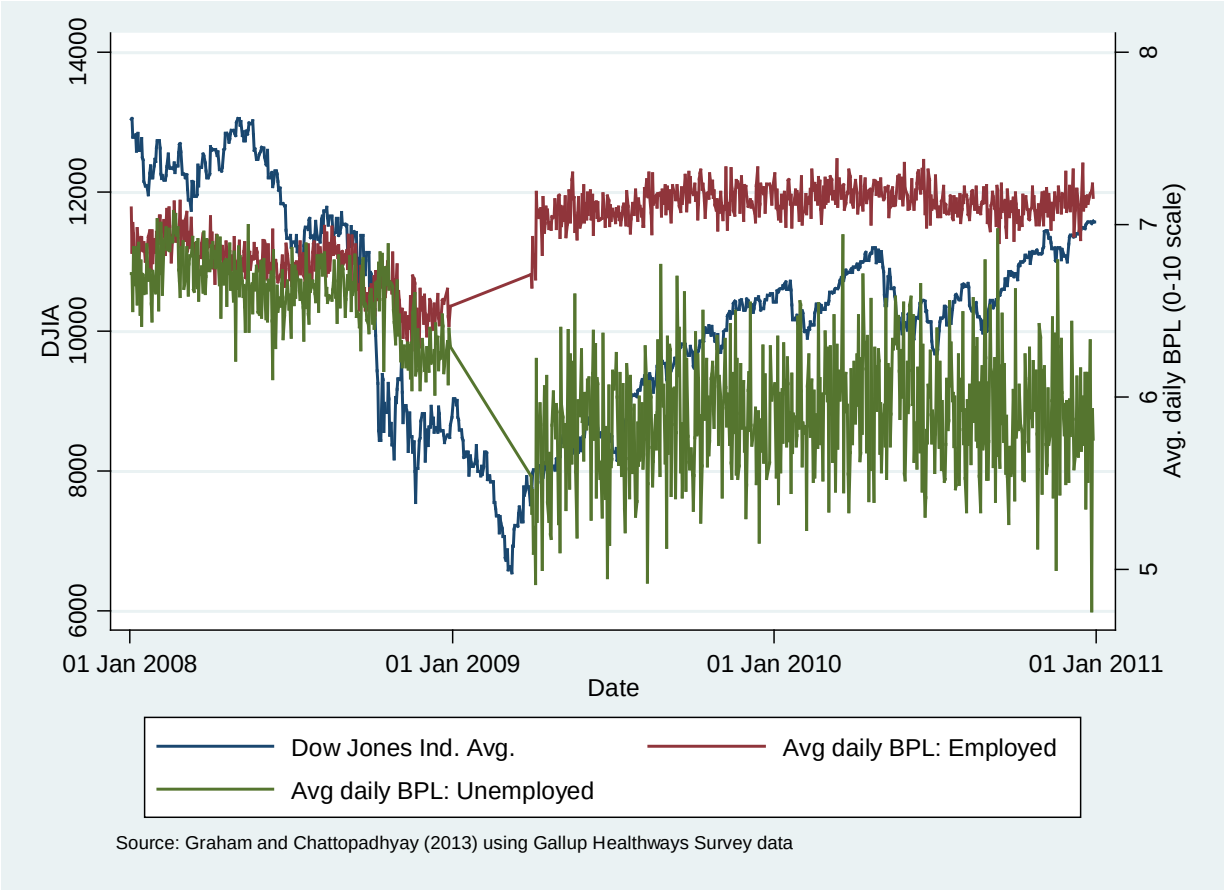
[14] Carol Graham and Andrew Felton (2006), "Does Inequality Matter to Individual Welfare: An Exploration Based on Happiness Surveys in Latin America", *Journal of Economic Inequality*, 4, 107-122.

FIGURE 1 – DIJA and Mean Levels of Subjective Well-being; U.S.: 2008-2011



Source: Graham and Chattopadhyay (2013) using Gallup Healthways Survey data

Figure 2 - Mean SWB – Employed versus the Unemployed, U.S. 2008-2011



Source: Graham and Chattopadhyay (2013) using Gallup Healthways Survey data

Figure 3 – Well-being Impact of Job Insecurity

	2008	2009	2010
Avg. SWB for firms firing employees	6.2981	6.8482	6.7932
Avg. SWB for firms not firing employees	6.8570	7.2726	7.2502
Difference (Statistically significant @ 1%)	0.5588	0.4245	0.4570

Source: Graham and Chattopadhyay, based on Gallup Healthways data

Figure 4 (Table 4)

Fear of unemployment by BPL levels, 2007-2012

	Percent
Overall	78.08
BPL less than or equal to 4	89.57
BPL greater than 4 and less than 7	83.44
BPL greater than 7	70.91

Source: Gallup World Poll, 2008-2013

Notes: The table displays the percent of respondents who said that considering the current job situation in the city or area where they live, it is a bad time to find a job. The countries included are the EU27 countries as well as Croatia, Iceland, Norway, and Turkey. Best Possible Life (BPL) measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life.

Source: Graham an d Nikolova, based on the Gallup World Poll