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ISSN: 2365-9793

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ABSTRACT

Why Does Happiness Respond Differently to an Increase vs. Decrease in Income?*

The answer is that people's evaluations of their income situation are based on different considerations when the economy is expanding and when it is contracting. When, in the course of economic growth, incomes generally are rising, evaluations tend to be dominated by "social comparison"—what is happening to the incomes of others. An increase in the incomes of others undercuts the tendency for happiness to grow with an increase in one's own income, and happiness remains fairly constant. But in a recession, as people increasingly have difficulty meeting their fixed financial obligations, the benchmark for income evaluations turns inward. "Financial hardship", the shortfall from one's own previous peak income, takes over, and the greater the shortfall, the less one's happiness. There is thus an asymmetry in the psychological roots of income evaluations when income is rising vs. falling , and this causes a corresponding asymmetry in the response of happiness to the direction of income change.

JEL Classification: I31, D60, O10, O05

Keywords: happiness, life satisfaction, subjective well-being, economic growth, GDP, income, easterlin paradox, recession, social comparison, financial hardship

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* Forthcoming in an issue of Journal of Economic Behavior and Organization in honor of Richard H. Day.

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Richard A. Easterlin

The subject here is the "asymmetric experience of positive and negative economic growth." The unbalanced nature of the happiness-income relationship was recently demonstrated in an empirical inquiry (De Neve et al 2018), providing support for a conceptual view advanced about a decade earlier based on prospect theory (Easterlin 2010, Kahneman and Tversky 1979). In an analysis of three different datasets, De Neve and his co-authors " find that measures of subjective well-being are more than twice as sensitive to negative as compared to positive economic growth" (p. 363). The measure of economic growth is real GDP per capita (hereafter "GDP" for brevity), and is taken here, as usually, to correspond to income when analyzing the happiness-income relationship.

The existence of the asymmetric relationship and understanding its causes are of considerable importance. Failure to recognize the disparate nature of the association leads to assertions like that of Diane Coyle who states, "The silliness of the notion that rising GDP does not increase happiness at all is even easier to see when you remember that a recession, when GDP declines just a little, makes people very unhappy" (Coyle 2014, p. 113). Coyle deserves credit for expressing the issue so cogently. Clearly, her reasoning is premised on the assumption that happiness responds positively and commensurately to income, whether the change in income is up or down.

Explaining the asymmetric relation: the income reference level

The take-off for explaining the asymmetric relationship is recognizing that people evaluate any given circumstance in terms of an internal benchmark (Tversky and Kahneman 1991). Is a person 5 feet 9 inches in height "tall"? In India, yes; in the United States, no. The difference between the two countries in people's evaluations of the same height is because the internal benchmark on which assessments are based differs. In India, the average height of men is 5 feet, 6 inches, and this determines people's benchmark. So, Indians assess a man 5 feet, 9 inches in height as "tall." But in the United States where the average height of men is 5 feet, 10 inches, and the benchmark underlying evaluations of height is correspondingly higher than in India, a man 5 feet 9 inches in height is not considered tall.

Similarly, evaluations of a person's income tend to be based on an internal benchmark, the "income reference level," established by one's observations of income. Is an income of $100,000 a lot or a little? If the average income of others is $200,000, it's "a little." But if the average income of others is $50,000, it's "a lot." The difference in the evaluation is due to the difference in the "income reference level" which, in this example, is determined by the average income of others. The effect of social comparison has been demonstrated in numerous studies, e.g., Barcena et al 2017, Clark et al 2008, Hagerty 2000, Oshio et al 2011, Tao and Chiu 2009.

So, the first step in explaining "the asymmetric relation" is recognizing that evaluations of income are based on an internal "income reference level" (cf. De Neve et al 2018, p. 371.)

Explaining the asymmetric relation: social comparison vs. financial hardship

But does the "income reference level depend solely on the income of others, on "social comparison," as in the example above? Here is where the reason for the "asymmetric experience" becomes clear. It is due to a shift in the principal factor determining the income reference level. When GDP is increasing above its past peak level, the income reference level is determined primarily by "social comparison" as described in the example above. When GDP is falling below its past peak level, however, the income reference level turns inward and is determined by one's "financial hardship," the shortfall from previous peak income. The greater the shortfall, the more the decline in happiness.

This shift when GDP declines in the dominant influence determining the income reference level is forced on individuals by the growing burden of meeting fixed contractual obligations. With income falling, it becomes increasingly difficult for people to satisfy their payments on mortgages or rental contracts, installments owed on purchase or lease agreements for automobiles and other "big ticket" items, amounts due on credit card debt, student loans, utility bills, insurance, taxes, and the like, and the result is increased stress and reduced happiness.

"Financial hardship" can be characterized, in general, as the stress induced by a shortfall in the income needed to meet one's financial obligations. Financial hardship increases progressively as income falls below its past peak level, and happiness declines correspondingly. As income recovers, stress is decreased, and happiness improves. Studies of countries large and small, less developed and developed, have found a negative impact on happiness of debt, payments on debt, and financial difficulties (Hansen 2008, Plagnol 2011, Gudmundsdottir 2013, Brown and Gray 2016, Liu et al 2020).

"Previous peak income" is better understood here, not as a unique value, but as the income required to meet comfortably one's financial obligations; it is perhaps better approximated by one's average income experience in the most recent period of sustained economic growth.

Social comparison is sometimes referred to colloquially as "Keeping Up with the Joneses." A counterpart for financial hardship might be "Keeping Up with the Car Payments." In a broader perspective, social comparison and financial hardship are concepts reflecting two primary sources of reference level determinants—the experience of others and one's personal past experience. In the study of economics, this distinction goes back to the days of James Duesenberry (1949) and Franco Modigliani (1949). The shift in which factor dominates, social comparison or financial hardship, should not be seen as an abrupt change, as though turning off a light switch. Rather, it is reasonable to suppose that social comparison and financial hardship are both in play at all times in determining the income reference level. When income rises above its previous peak, social comparison increasingly predominates, as income falls below it's previous peal "financial hardship" starts to take over.

In periods of negative economic growth, people are doubtless aware that most others are in the same financial predicament as theirs, and if social comparison predominated in determining their income reference level there would be no change in happiness. As is true in periods of positive economic growth, a change in one's own income would be matched by a corresponding change in one's income reference level, but in this case, the direction for both would be downward. In fact, however, knowing that others are in the same boat does nothing to deal with the urgent necessity of meeting one's own contractual obligations, of "Keeping Up with the Car Payments," so "financial hardship" predominates on the downside.

As economic growth resumes after a recession and income returns towards its previous peak, financial hardship gradually lessens and happiness increases. Once income rises above its previous peak, however, the pressure of a shortfall in meeting one's financial obligations is gone. Social comparison takes over as the dominant determinant of the income reference level and negates the positive effect on happiness of additional increases in one's own income. Indeed, now new financial obligations may be undertaken, perhaps with the aim of "Keeping Up with the Joneses."

Summary and Discussion

Why does happiness respond differently to an increase vs. a decrease in income? When economic growth is positive and carries beyond its previous peak, one's income reference level changes commensurately with one's own income, undercutting the tendency towards greater happiness. When growth is negative (or positive but below its previous peak) the income reference level is essentially fixed at the level of previous peak income. As a result, happiness changes positively with one's own income. This shift in the behavior of the income reference level is the result of a corresponding change in the factor principally determining the reference level. On the upside, it's social comparison—what is happening to the income of others; on the downside, it's financial hardship, the shortfall from one's previous peak income, making it difficult to meet one's fixed financial obligations.

The rebuttal to Diane Coyle's critique of the nil effect of income increases on happiness is that she fails to understand that the income reference level along with income is a critical determinant of happiness, and the income reference level moves asymmetrically with an increase vs. decrease in income.

Recognizing the central role of financial hardship in determining happiness when income declines helps to understand the phenomenon of loss aversion. If declining income triggers a penalty for over-indulgence in credit extension, then it is reasonable to suppose that people would have a disproportionate reaction to a decrease vs. increase in income.

Acknowledgements: I am grateful to Kelsey J. O'Connor for help with this article.

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