Review of Huen et al by Charles Hall

Title needs much more precision and grab

P xv , The vast majority of physical scientists.. do we know that for fact? I would guess that The vast majority of physical scientists are probably technicians measuring some tiny factor in the lab and not thinking much about anything ..

?physical resource scientists???

We have added a reference to Union of Concerned Scientists “Warning to Humanity” in the Preface, replacing the sentence that Charlie asked about. We think this is a stronger route into the material.

We are encountering EVERYWHERE WE LOOK limits to the

There are some resources for which extraction rates increase year over year. “Everywhere we look” isn’t general, so we have opted against the suggestion to add “everywhere we look.”

even the poorest nations are “accelerating markedly.” [3] GDP per capita and living

standards are expected to grow HOW ABOUT PROJECTED TO GROW OR ECONOMISTS PROJECT…

We have made this suggested change. It now reads:

“They expect GDP per capita and living standards to grow continuously into the foreseeable future, …”

Bottom –good

We made no changes in response to this comment.

Xv1

Both types of capital are NEEDED and

The sentence in question has been clarified to say “Both types of capital are necessary for providing the flow of services that enable production of goods, services, and additional manufactured capital for future production.”

when forests are cut down ??DESTROYED? FORESTS CAN REGROW

We agree that forests are a bad example. The sentence now reads “And, we ``use up'' natural capital when soils are degraded, fossil fuels are depleted, clean air and water are polluted, and wetlands deteriorate.”

should be concerning to everyone! THE CONCERN OF

The sentence now reads “Such depletion of natural capital is the primary concern of many scientists, and it should be the concern of everyone!”

are not accounted FOR in

We think that “accounted for in” sounds awkward: two consecutive prepositions. “Accounted in” sounds cleaner to our ears. Our approach has been to avoid two consecutive prepositions. Shall obtain a ruling from a grammarian?

rigorous balance sheet OF ASSETS that tracks

Spelling has been corrected. Thanks!

I am pretty sure that there exists now other estimates of national GDP etc that include e.g. environment destruction. Maybe not asset depletion though…. For oil , to they include depletion in assessments for many decades. I am worried that this is not so new…

We discuss an example of comprehensive accounting on p. xvi. The Inclusive Wealth Report is a step in the right direction, but does not have a broad thermodynamic approach to the accounting. Nor does it deal with the question of accumulation, which is one of the important aspects of our approach. If you know of other approaches to comprehensive accounting, please let us know.

Furthermore, in section 7.3, we have this footnote:

GDP is not the only indicator of well-being available; there are several other measures in use. The Human Development Index (HDI) is a globally accepted measure that augments GDP with education and life expectancy.\cite{Malik:2013aa} In the US, the state of Maryland has been tracking well-being using the \emph{Genuine Progress Indicator} (MDGPI), which combines measures of economic transactions with environmental and social costs.\cite{MDDNR:2013aa,Bagstad:2007aa} The MDGPI is closely related to Herman Daly's Index of Sustainable Economic Welfare (ISEW) which allows policy-makers to account for contributions of and impacts on the natural environment.\cite{Daly:1994aa,MDDNR:2014ab} Another example is the Nation of Bhutan's \emph{Gross National Happiness} (GNH), a systematic, annual compilation of survey and other data related to nine factors: ecological diversity and resilience, psychological well-being, health, education, culture, time use, good governance, community vitality, and living standards.\cite{Ura:2012aa,GNH:2014aa} These alternatives to GDP are slowly gaining acceptance, particularly as their valuation methods are strengthened.\cite{Lawn:2003aa}