Comments on:
Frey & Chamberlain;
Kline, Bluffstone, Coulston, Haight, Wear, & Zook;
and
Michaud, Atallah, Huang, Bennett, & Leahy

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Frey and Chamberlain
A very, very simple example

• Suppose marginal costs of collection increase in area and amount collected; every time you go another meter you pick another kg, and you have to carry it and everything else you’ve picked back to the car.

• Implies cost increases as square of distance covered

• Objective is \((p - cqA)qA\)

• You’d stop collecting at a distance of \(A = p/2cq\)

• Profit would be \(p^2/4c\), and average profit per unit area of collection would be \(pq/2\), but WTP for more than \(A = p/2cq\) would be zero.
Rents arise from scarcity, so what’s scarce?

• The area available for collection?
• The carrying capacity of the habitat?
• Accessibility?
• The expertise of collectors?

Herr Faustmann, meet Herr von Thünen?
I learned a lot from this paper

Some questions:
- It appears that storage rates in aggregate are really low; increase of 480 Tg CO$_2$eq yr$^{-1}$ on base of 332,000 Tg CO$_2$eq = 0.145% -- 1/700$^{th}$?
- If we’re this close to steady state in many places, and if we really want to store more carbon, should we be considering storage in forest products?
- What really is the steady-state outcome? Do we want to leave trees standing until they burn? What do we do with potential fuel that’s been cleared?
- If the cost is $1,178 per ha, why would a subsidy of $247 per ha be sufficient?
- Leakage from a US program and international priorities?
How do cost-effectiveness of domestic and international efforts compare?

Loads from Indonesian peat fires have exceeded all carbon emissions from the US at times.

Is leakage a real concern?
Michaud, et al.

• “There are three kinds of people in the world . . . ”
• We’re going to be uncertain about many things in trying to value ESS; Michaud, et al, suggest bias from excluding uncertainty will be downward.
• Is it more important that we:
  - Account for uncertainties in the distribution of preferences; or
  - Account for uncertainties in the distribution of effects?
  - Michaud, et al., suggest former may be more problematic.
I found myself wishing both for greater specificity and greater generality

• Greater specificity:
  - Application to a specific “bioinvasion-styled disturbance” would help fix ideas.
  - I had a difficult time interpreting all the parameters/inputs in Table 1
  - Section IV, on “Using a Non-Market Valuation Survey,” would have benefited from a specific application.

• Greater generality:
  - It’s not clear to me how much we can infer from the results of Section III; making the specific example clearer and simpler might facilitate a discussion of how readily it can be generalized.
  - Jensen’s inequality (“a concave function of the expectation is greater than the expectation of the concave function”) seems conspicuous by its absence.
A few final remarks

• Is new terminology being invented, and if so, is it necessary/useful?
  - “three measures of statistical accuracy (bias, precision, and trueness)”
  - “trueness is defined as closeness to the informed estimator”
  - If variables of interest follow limiting distributions [?], it seems such alternative concepts would be redundant with sufficient statistics (though maybe they’d be useful for exposition?)
  - Rothschild-Stiglitz risk definitions?

• Sources of imprecision are quantified separately, but – inasmuch as economic valuation is typically a chain-rule phenomenon – compound effects will be multiplicative.