Issue that motivated the simulation example—I don’t think it applies any longer, as the most recent NYTS data that originally was usedjust doesn’t support any of this. But the discussion was stimulating.

**CLAIM 1:** ATP CAUSES cigarette smoking and this effect is constant over time.

If so, given that **ATP use is increasing** and **ATP users initiate smoking more**, we should see an increase in the cigarette smoking initiation in the population. We assume that the causal pie is there.

**CLAIM 2:** Sensation Seeking (SS) confounds the relationship between ATP and cigarette smoking.

**CLAIM 3:** The prevalence of SS is constant over time.

**CLAIM 4:** The effect of SS on ATP decreases over time. This is because sensation seekers over time shift to a more risky/pleasurable substance like smoking.

So, what happens in terms of the prevalence over time?

The co-authors concern was why would there be an increase in the prevalence of smoking after removing the effect of SS, if ATP and smoking is confounded by SS.

Given these, the prevalence of smoking should increase because SS are still contributing to the smoking prevalence constantly over time. And if there is a causal effect of ATP on smoking, then as ATP goes up, smoking should go up regardless of confounding.

I think there is also an interesting bit of prediction given a causal framework here on trends.