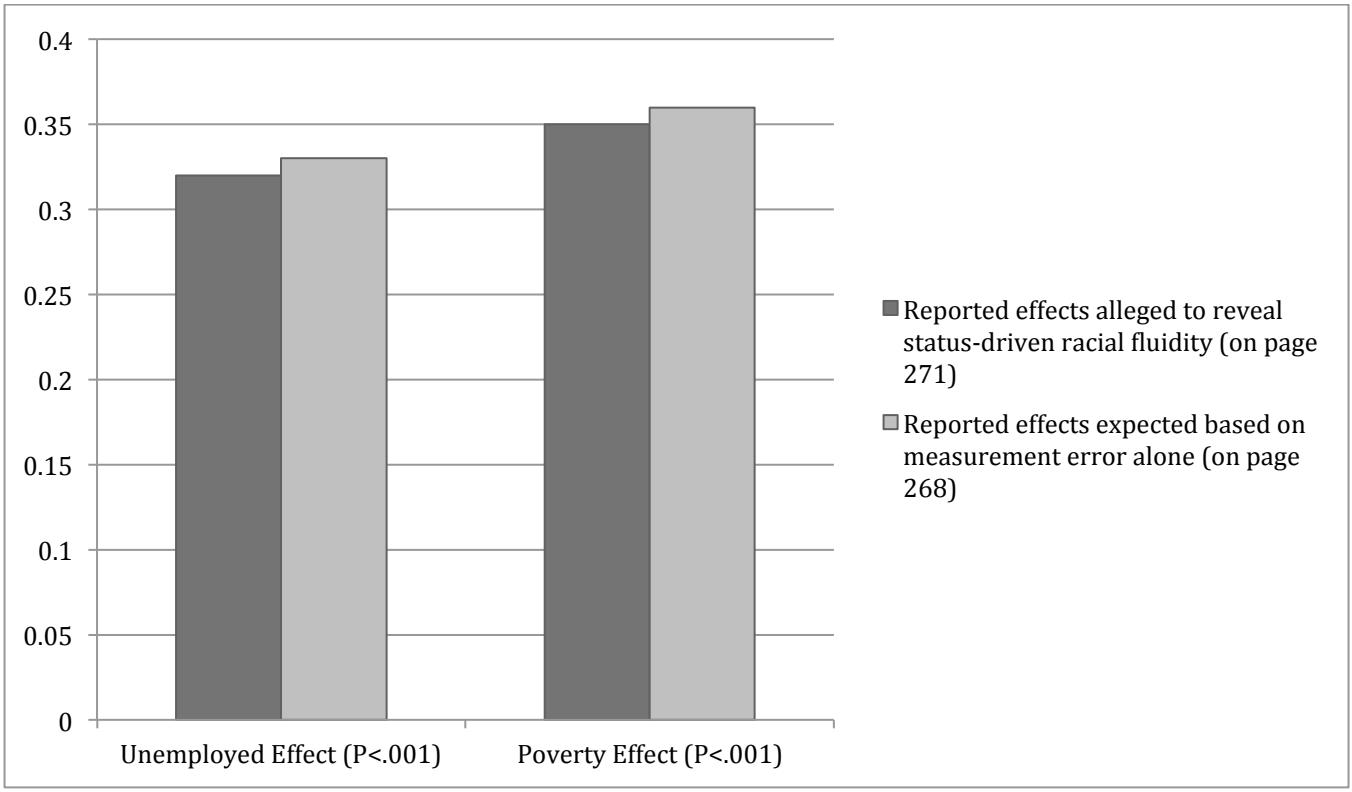
Figure 6. S&P's Own Results Demonstrate That The Method of Controlling For Prior Black Classification Cannot Reliably Distinguish Status-Driven Fluidity From Measurement Error



Our Conclusion: Saperstein and Penner noted that their "definitive response" to our SocSci replication study would appear in AJS. In their now published response, Saperstein and Penner (2016) conduct simulation analyses aimed at showing that their modeling tactic of controlling for prior racial category is not as problematic as we claimed. Despite implementing a simulation procedure that is strongly biased toward supporting their conclusion, Saperstein and Penner still report (but do not discuss) average random-fluctuation-only coefficients for Black classification that are *larger* than the effects presented as substantively meaningful and highly statistically significant just a few pages later. Thus, Saperstein and Penner's own simulation analyses (in Table 2) undermine the trustworthiness of the results from their primary modeling strategy (in Table 3).

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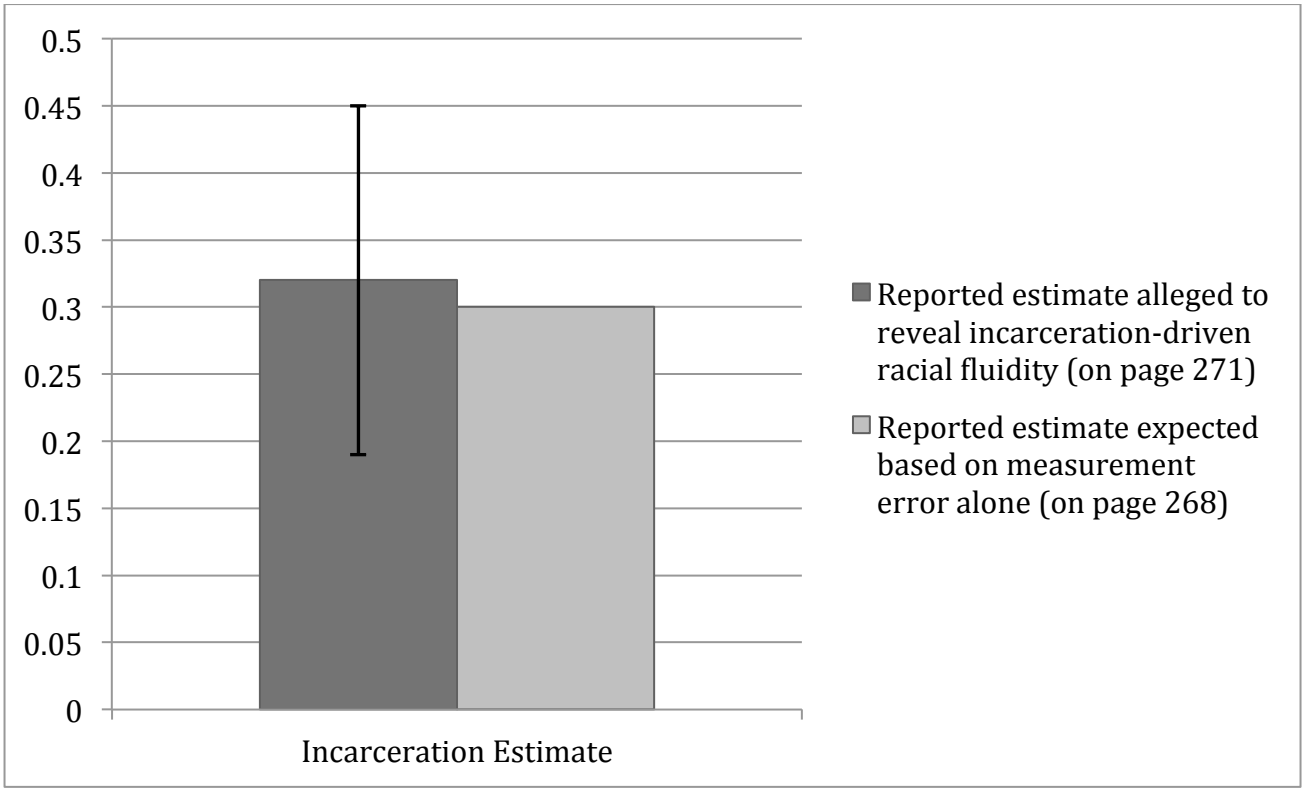
Figure 7. S&P's Own Results Demonstrate That Controlling For Prior Black Classification Cannot Reliably Distinguish Incarceration-Driven Fluidity From Measurement Error



Note: The error bar indicates the approximate standard error of the estimate (.13) reported in Table 3 based on its p-value (Saperstein and Penner 2016:271).

Our Conclusion: Taking into account the confidence interval around the baseline estimate, the estimate derived from the random-fluctuation-only simulation is statistically indistinguishable. In other words, Saperstein and Penner report (but do not discuss) an average random-fluctuation-only coefficient for incarceration's impact on Black classification that is *equivalent* to the baseline effect presented as substantively meaningful and statistically significant. While there is much in Saperstein and Penner's work that should inspire future research, the approach of simply controlling for prior racial category should be abandoned.

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Table 9. Saperstein and Penner's (2016) Own Results Comparing Different Methods for Modeling Status-Driven Fluidity

	Estimates When Controlling for Prior Racial Classification	Estimates From Respondent Fixed-Effects Models
Classified as White:		
Ever Unemployed	-.027***	-.002
Ever Impoverished	-.032***	.003
Ever Incarcerated	-.043***	-.008
Ever Received Welfare	-.029***	-.003
Classified as Black:		
Ever Unemployed	.005***	.002*[1]
Ever Impoverished	.006***	.000
Ever Incarcerated	.008***	.003
Ever Received Welfare	.006***	.001

+p<.10
*p<.05
**p<.01
***p<.001
N>100,000
The specific sample sizes and standard errors were not reported.

Our Conclusion: Although Saperstein and Penner offer no explanation for the disparity, their own results demonstrate a marked difference between controlling for prior racial categorization and utilizing respondent fixed effects to model status-driven fluidity (2016:275). In our view, the difference is driven by the inability of the first approach to distinguish theoretically relevant within-individual changes from time-invariant between-individual selection effects.

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[1] This lone statistically significant result is extremely fragile. See our other supplemental analyses focusing on the unemployment status variable as well as those describing hidden biases in the construction of all of Saperstein and Penner's "ever" status measures. In general, it is important to remember that while fixed effects models offer a needed step in the right direction, they cannot solve problems related to inadequate data and questionable variable construction (such as when one is trying to measure within-individual change in self-identification as White and the word "White" is only a response option at time 2).

Table 10. Fixed Effects Linear Probability Estimates for the Relationship Between Long-term Unemployment Status and Racial Classification

PANEL A. Uses S&P's Constructed "Ever Unemployed" Measure

Racial Classification	b	Std. Error	Probability
White	-0.002	0.002	.26
Black	0.002	0.001	.03

PANEL B. Uses Current Unemployment Status

Racial Classification	b	Std. Error	Probability
White	0.000	0.002	.97
Black	0.000	0.001	.86

Source: The 1979 National Longitudinal Survey of Youth.
Notes: The sample in Panel A includes 177,934 person-years with non-missing racial data. The sample in Panel B includes 165,112 person-years with non-missing racial and unemployment data. All models incorporate respondent and year fixed effects.

Our Conclusion: Saperstein and Penner's ever-unemployed measure has the same problems that we identified with the ever-incarcerated variable (especially in regard to the problematic treatment of missing data). Similar to their earlier study (2010), Saperstein and Penner (2012:692) note that, "Supplemental analyses (not reported) estimating classification models with all current effects and identification models with all lasting effects provide similar results, indicating that our substantive conclusions about racial fluidity and inequality are not affected by these coding decisions." However, as shown above, the specific fixed-effects results for current versus ever-unemployed status are not similar and would lead to different substantive conclusions.

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Table 11. Fixed Effects Linear Probability Estimates for the Impact of Reported Crack Use on Black Racial Classification

A. Ever/Never Used Crack Interaction with Assignment to Confidential Survey

Variable	b	Std. Error	Probability
Ever Used Crack	-0.0001	0.0034	.98
Confidential Reporting	0.0035	0.0014	.01
Confidential Reporting*Ever Used Crack	0.0034	0.0054	.53

B. Number of Times Used Crack Interaction with Assignment to Confidential Survey

Variable	b	Std. Error	Probability
Used Crack 1 to 2 Times	0.0057	0.0048	.24
Used Crack 3 to 10 Times	-0.0033	0.0058	.57
Used Crack 11+ Times	-0.0021	0.0042	.62
Confidential Reporting	0.0034	0.0014	.01
Confidential Reporting*Used Crack 1 to 2 Times	-0.0145	0.0096	.13
Confidential Reporting*Used Crack 3 to 10 Times	-0.0049	0.0115	.67
Confidential Reporting*Used Crack 11+ Times	0.0167	0.0072	.02

Source: The 1979 National Longitudinal Survey of Youth.
Notes: The sample includes 24,545 person-years with non-missing data (1992, 1994, and 1998). The models incorporate respondent and year fixed effects. To account for non-essential ill conditioning in product-term analysis, the crack use and confidential reporting variables are centered. Never used crack is the omitted category in Panel B.

Our conclusion: Saperstein and Penner (2016:280) admit that their results could be driven by race-related selection biases, as respondents were not randomly assigned to the confidential survey mode and confidentiality may matter more for some populations than others in terms of willingness to report drug use. Applying a fixed-effects model to the data reveals that Saperstein and Penner's reported findings were indeed a spurious byproduct of selection biases. Our results in Panel A indicate that whether or not interviewers heard about the respondent's crack use is irrelevant for their racial classification of that respondent. The results in Panel B suggest the possibility of a significant interaction between survey mode and reported frequent crack use, but, as in Panel A, the sign of the product term coefficient (positive) is contrary to Saperstein and Penner's hypothesis. While there is much in Saperstein and Penner's work that should inspire future research, the approach of simply controlling for prior racial category should be abandoned.

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