Response to Reviewers for MS 2021-314-R1, "Patterns of Panethnic Intermarriage in the United States, 1980-2018."

I thank the editor for providing with me the opportunity to revise the paper and to the reviewer (R4) for providing further valuable comments on ways that I could strengthen the paper. The revised draft has been changed considerably to address those comments and the result is an improved paper that I hope accomplishes what the reviewer is asking for.

Below I respond to each of the reviewer's points in turn, but first I want to address the central issue that was raised by the reviewer and to which the editor was sympathetic, namely that a compelling case was not made for the study. In large part, the reviewer felt that I had not done so because there was "little discussion or documentation of previous findings (in their specific or nuanced form) or how they may suggest unresolved gaps in the panethnic literature." I fully acknowledge that the reviewer is correct that I did not dive deeply enough into the prior work to tease out the main findings and discrepancies of that work.

To rectify this issue, I have completely re-written most of the background section entitled "Panethnicity in Intermarriage" (pp. 4-10 of the revised manuscript). This section now begins by describing four questions that prior researchers have examined with regard to panethnic intermarriage. Specifically,

- What is the likelihood of panethnic intermarriage for Asians and Latinos relative to interracial outmarriage?
- Is panethnic intermarriage more common for Latinos or Asians? This question is frequently used to assess the relative importance of cultural vs. structural factors in influencing panethnic affinity.
- How heterogeneous is the likelihood of panethnic intermarriage across different ethnic combinations (e.g. Japanese/Chinese vs. Chinese/Filipino)? Differences may point to more specific regional affinities or even separate "melting pots" (as in the case of South Asians).
- How does nativity affect the likelihood of panethnicity? This question is often framed around the issue of (segmented) assimilation.

For each of these questions, I discuss the findings of prior work. Doing so has made it clear that there are some discrepancies, disagreements, and blind spots in prior work. Although prior work has generally agreed on these questions regarding Asian panethnic intermarriage, the results for Latinos have been much more discrepant. Qian et. al. (2012), for example, find a similar tendency toward panethnic intermarriage among their Mexican, Puerto Rican, Chinese, and Filipino respondents, while Rosenfeld (2001) and Fu (2007) generally found much stronger patterns of panethnicity among Asians than Latinos. Similarly, Qian et. al. (2012) find that nativity increases the tendency toward panethnic intermarriage for all four groups they study

while Rosenfeld (2001) found that nativity actually reduced the likelihood of panethnic intermarriage for Latinos in their sample.

The new structure of the revised draft has allowed me to more clearly highlight these discrepancies and inconsistencies with regard to the strength of panethnicity among Latinos and the data blind spot regarding South Asian groups. I have moved the previous material on some of the methodological issues with prior work to a much shorter subsection entitled "Other Methodological Limitations of Prior Work." The only section that was not completely re-written was the subsection on the role of birthplace and language endogamy, which now follows directly from my discussion of the final research question of prior work on the role of nativity.

In addition to rewriting this background section, I also substantially rewrote the introduction to better motivate the study and to provide the specific research questions that I will be asking (which align with the questions discussed in the later background section). I have also made smaller but important changes to later parts of the manuscript to align with these research questions. I believe that the result is a manuscript in which both the contributions and theoretical expectations are much clearer.

At the risk of redundancy, let me enumerate what I think are the major contributions of the paper.

- Update prior work with contemporary data and methods. I understand that the reviewer was not much impressed by this claim. However, I continue to believe that this issue is vitally important. The US is becoming increasingly diverse largely through the growth of Asian and Latino populations which are themselves becoming more diverse in terms of national origin and generation. Yet, the most rigorous and cited work on this topic uses data from a small set of ethnic groups from Census 1980, 1990, and 2000. I have attempted to communicate the importance of this intervention in the introduction of the updated draft.
- Help to resolve disagreement in prior work about the relative strength of panethnic intermarriage among Latinos. My results consistently show that panethnic intermarriage is relatively weak among Latinos, which is consistent with some but not all of the prior work. Notably, this result is inconsistent with that of Qian et. al. 2012, although the reviewer implies that my work simply "confirms" their prior results. Furthermore, my examination of patterns of marriage across specific Asian and Latino ethnic groups reveals an additional point of divergence between Asians and Latinos that has not been noted in prior work. While Asian groups all follow a singular pattern (high panethnic intermarriage, moderate outmarriage with whites, and low outmarriage with blacks), Latino ethnic groups are far more diverse and less consistent with regard to these patterns. These findings are now highlighted in the conclusion of the revised draft.
- Develop an understanding of how birthplace and language endogamy affect patterns of intermarriage for Asian and Latino ethnic groups. Prior work has used a simple native/immigrant comparison, but I show that this does not properly capture the complexity of how these two forms of endogamy affect ethnoracial intermarriage. I show

that empirically these forms of endogamy currently create barriers to panethnic intermarriage for Asians but not Latinos.

Now let me turn to the specific comments of the reviewer (italicized) and my responses.

As before, this newly-revised paper evaluates changes in patterns of Asian and Latino panethnic intermarriage using data from the 1980 decennial census and annual files from the American Community Survey (2014-2018). For the most part, this revised paper represents a good-faith effort to address the most problematic technical aspects of the original draft. The study, according to the author, confirms with updated data the findings of previous studies: Asians are more (and increasingly more) likely than Hispanics to experience panethnic intermarriage. Although not new to this genre of research, the author also applies a counterfactual model (i.e., conditional logit models) that considers local marriage market conditions, which are defined at the metropolitan/state group level in the 1980 census data and in the 2014-2018 ACS data.

Unfortunately, this revised draft still does not make a particularly compelling case for this study, at least not from a substantive standpoint. The paper is competently executed and presented to the reader. There obviously is some value in providing updated results with a counterfactual model that confirms previous results of Qian et al. (Demography 2012) and others. That not really the problem here. It is that the author—even in this revised draft doesn't say what the value actually is. What exactly is it that makes this paper new and original work? That is much less clear, at least to me, because there is little discussion or documentation of previous findings (in their specific or nuanced form) or how they may suggest unresolved gaps in the panethnic literature. As I indicated in the previous review, "What does the author expect to find, and why?" I still don't know the answer to this question.

As I discuss above, this seems to be the reviewer's central concern and I have attempted to address it by a complete rewrite of the background section that more concretely discusses the findings of prior work and a substantial rewrite elsewhere. See my full response above.

To be sure, this paper includes more national origin groups than most prior studies, but there is almost no discussion of different ethnic patterns among these groups (e.g., hypotheses) or why we might expect changes over time.

The background section now lays out two possible expectations on pp. 5-6. The first possible expectation is that regional affinities among different national origins groups (e.g. East vs Southeast Asian) may lead to heterogeneity. The second is that South Asians may exist as a completely separate panethnic group with little affinity between South Asians and East/Southeast Asians). Both of these expectations are confirmed by the results presented on pp. 19-21 and are discussed further in the conclusions.

In addition to these findings, Figure 5 also shows that the patterns for Asian ethnic groups conform to a singular pattern characterized by high panethnic intermarriage, moderate

outmarriage with Whites, and very low outmarriage with Blacks. This is not true of Latino ethnic groups, whose pattern of intermarriage are very specific to a given ethnic group. I discuss this in some detail on pg. 21 of the revised draft where I say:

"Overall, Figure 5 implies very different patterns of intermarriage for Latino and East/Southeast Asian ethnic groups. East/Southeast Asian ethnic groups follow the same general pattern. Panethnic intermarriage is more likely than intermarriage with Whites or Blacks, and the barriers to intermarriage with Blacks are far more substantial than the barriers to intermarriage with Whites. Furthermore the likelihood of intermarriage with Whites and Blacks is relatively similar across ethnic groups. The consistency of this pattern speaks to a broad panethnic pattern of intermarriage for East/Southeast Asians, even given some regional and national variation.

On the other hand, the results for Latino groups are characterized by ethnic-specific heterogeneity. In no case is ethnic exogamy clearly preferred to outmarriage with Whites and there are large differences across ethnic groups in the tendency to intermarry with both Whites and Blacks. These results are not consistent with a singular pattern of intermarriage, panethnic or otherwise, among Latinos."

The reviewer also raises the question of why we might expect panethnic intermarriage to be changing over time. While I could generate some post-hoc hypothesis to explain what I observe in the data, I would prefer to not do so. I do not believe that all exploratory questions need to be framed by hypotheses. The question of whether panethnic intermarriage is becoming more common over time has implications for the strength of panethnicity in the future and the salience of certain ethnoracial boundaries. Thus it is an important question to know the answer to even if we don't necessarily know why it is happening.

In the response to the reviewers, the author indicates instead that this is a "descriptive" study rather than one what is interested in "explanation." Why then are readers presented with the "counterfactual model" which is usually concerned with "explanation" if not causal explanation.

My use of the term "counterfactual model" may have misled the reviewer into thinking that this model belongs in the realm of "causal modeling." I used that term in prior drafts because it accurately describes the modeling procedure - predicting the true marriage among a set that includes the true marriage and a set of counterfactual marriages. However, the model was never intended to be a counterfactual model in the way that this term has been used by the causal modeling literature. To avoid any further confusion, I have replaced all references to a "counterfactual model" with "conditional logit model" in this revised draft.

Why are South Asians different from other Asian groups?

I am unsure how the reviewer means the term "different" in this context. In terms of panethnic intermarriage, South Asian ethnic groups actually have patterns of panethnic intermarriage with one another that are similar to the patterns for East/Southeast Asians as is shown in Figure 2.

However, there is no evidence of panethnic affinity between South Asian and East/Southeast Asians. I discuss arguments from prior literature on the ambiguous racial identity of South Asians as "Asians" and the lack of panethnic connection between these two blocs on pg. 6 of the revised draft, which I reproduce in whole here:

"South Asian ethnic groups are notably absent from most prior work, owing in part to a small sample size in historical data sources. Qian et al. (2001) do include an "Asian Indian" ethnic group and find no evidence of panethnic intermarriage between this group and other East/Southeast Asian ethnic groups. This finding is consistent with other research showing that in everyday practice South Asians are not treated as Asian in the US but rather as "ambiguous non-whites" (Kibria 1996; Morning 2001; Schachter 2014). More recent work by Lichter et al. (2015) also shows low rates of outmarriage to other (non-South) Asian groups among Indian immigrants. However, due to sample size limitations, Asian Indians are the only South Asian population included in prior analyses, making it impossible to determine the extent of panethnicity among South Asian ethnic groups themselves."

I reference this work again on pg. 12 in justification of my decision to separate these blocs for empirical analysis, and again in my conclusions on pg. 22 where I say:

I find no evidence of panethnic affinity between East/Southeast Asians and South Asians. Scholars have raised the question of whether panethnic Asian coalitions in the US truly include South Asians (Kibria 1996). In terms of the interpersonal panethnicity measured here, the answer is a resounding no. What emerges instead are two distinct "melting pots" of panethnic affinity among Asian populations.

Why are the marriage patterns of some ethnic groups changing more rapidly than others?

I don't know what the reviewer is referring to here other than the more general comments regarding change over time which I address above. I do not explore changes over time for particular ethnic groups due to data limitations. The analysis of specific ethnic groups is limited to the more recent time period.

In my view, simply showing that that 2014-2018 results (not 2018) confirm that Asians are more or less likely to form panethnic unions is insufficient for publication in the premier population journal.

As I note in the introduction to this memo, I believe that this paper makes far more important contributions (which I have enumerated) than the very narrow suggestion being made here. I believe the changes made throughout this revision should help make those contributions clearer.

Any explanations based on local marriage market conditions also are not new (see, at a minimum, some of the previous work by Choi, which is not referenced here). The author instead

cites Harris and Ono's criticism of biases introduced by looking at national marriage markets. This is not a bias, despite what Harris and Ono claim. It only means that simple descriptions of national markets may obfuscate or hide that fact that national group to group differences in intermarriage may be "explained" by their uneven spatial distribution across the country. Controlling for local marriage markets is an explanation of group to group differences. In fact, isn't "explanation" then the main purpose here of the counterfactual model? If so, then it is not enough to say that you use a counterfactual approach or include controls for a few additional variables in the models. How are these technical issues fixed or the results of competing claims in the literature adjudicated by the application of these models?

I never claimed that the issue of considering marriage markets was new to this specific literature and certainly not the intermarriage literature more broadly. In all of my drafts, I have noted that both Rosenfeld (2001) and Fu (2007) attempted to address this issue in different ways (but both with significant drawbacks). My claim is that my handling of the issue here is superior to how it has been handled in prior work, both due to improved data quality and new modeling techniques. Specifically, the modeling approach used here makes it much easier to address this issue in an organic way by sampling alternate partners from the same designated spatial area.

I feel that the reviewer is really engaging in an argument more with Harris and Ono than my paper. The reviewer is technically correct that what Harris and Ono describe is not necessarily a bias. There may be particular research questions where understanding the results for a "national" model are important. This could be the case, for example, if the researcher was trying to understand how different settlement patterns limited opportunities for interracial contact. However, we also generally want our models to more accurately reflect the social process that we are trying to capture whenever possible. No definition of the "marriage market" from which partners are selected can be perfectly accurate, but a more locally scoped marriage market will always more accurately reflect the social process than a nationally scoped marriage market. Given the goals of the paper, the use of a local marriage market is the correct approach.

Regarding the "previous work by Choi," the reviewer provides no citation to the work, so it is difficult for me to respond to this concern. Perhaps, the reviewer is referencing the work by Choi and Tienda (2016)? If so, this is indeed excellent work, but I fail to see how it relates to the current study. That study leveraged variance in intermarriage across marriage markets to understand how various market-level variables affect the odds of intermarriage. I am not exploring variance across marriage markets here.

Other issues

1. In the end, the authors claim that Asians are being racialized at a faster rate than Hispanics. This is true by definition. In the Census, Asians are a racial category. Latinos are not.

The reviewer seems to put a lot of weight on the Census for determining what is a race. This is odd given that the Census Bureau was trying to remove the split question format from Census 2020 and move to a single race question which included a Latino category. If they had not been

denied by the Trump administration, would the reviewer then revise their understanding of Latino racial identity?

Like most scholars who study racial classification and identity, I see the Census Bureau and other governmental agencies as important institutional players in defining racial categories that are used in everyday practice, but they are not definitive. The academic writing on the historical and contemporary racial ambiguity of Latinos is numerous. I have tried to cite more of this work in the revised draft (Lopez and Espiritu 1990; Rodríguez 2000; Frank et al. 2010; Fox and Guglielmo 2013).

I should also note that the reviewer's claim that "Asians are a racial category" on the Census is not completely accurate. A variety of Asian national origin groups are provided in response to the race prompt (e.g. Chinese, Japanese, Vietnamese) rather than a singular "Asian" option. Given that the argument being made here is whether Asian ethnic groups are singularly raced as "Asian", the distinction is relevant.

2. The Blau measure of diversity is usually referred to as the Simpson Index (see recent Census publications) or simply as the diversity measure. There is no need to credit Blau for this measure or to assume that the Blau measure is a commonplace label.

This measure is variously known as Simpson's diversity index, the Gini-Simpson Index, the Blau index, and the Gibbs-Martin index. It is also closely related to the Herfindahl index used in economics. In my view, it should not be called generically "the diversity measure" as there are other equally legitimate options for measuring diversity such as (Shannon) entropy. To address the reviewer's concern, I have changed all references to the "Simpson's diversity index" in the current draft.

3. Using the incidence measures based on the recency of marriage (5-year marriages) is a useful feature of the 1980 Census and the ACS files. But, again, this alternative approach to measures based on prevalence is not "new" to the intermarriage literature. The author leaves the impression that this is a new feature of the paper.

In the current version of the paper, this issue is discussed on the bottom of pg. 9. I do not believe that anything in the way it currently is written implies that this approach is new to the intermarriage literature.

4. The author should describe some of the specific findings (in numerical form) from previous studies. It is unclear throughout the introduction exactly what is big or little, commonplace or rare. This would help put the current study results in context.

See my main points at the top of this memo. The major change in this revision is a more thorough discussion of prior findings.

References

Choi, Kate H., and Marta Tienda. "Marriage-Market Constraints and Mate-Selection Behavior: Racial, Ethnic, and Gender Differences in Intermarriage." *Journal of Marriage and Family* 79, no. 2 (2017): 301–17. https://doi.org/10.1111/jomf.12346.

Frank, Reanne, Ilana Redstone Akresh, and Bo Lu. "Latino Immigrants and the U.S. Racial Order: How and Where Do They Fit In?" *American Sociological Review* 75, no. 3 (June 1, 2010): 378–401. https://doi.org/10.1177/0003122410372216.

Fox, Cybelle, and Thomas A. Guglielmo. "Defining America's Racial Boundaries: Blacks, Mexicans, and European Immigrants, 1890 – 1945." *American Journal of Sociology* 118, no. 2 (2013): 327–79.

Fu, Vincent Kang. "How Many Melting Pots? Intermarriage, Pan Ethnicity, and the Black/Non-Black Divide In the United States." *Journal of Comparative Family Studies* 38, no. 2 (2007): 215–37.

Kibria, Nazli. "Not Asian, Black or White? Reflections on South Asian American Racial Identity." *Amerasia Journal* 22, no. 2 (January 1, 1996): 77–86. https://doi.org/10.17953/amer.22.2.m36385l655m22432.

Lopez, David, and Yen Espiritu. "Panethnicity in the United States: A Theoretical Framework." *Ethnic and Racial Studies* 13, no. 2 (April 1, 1990): 198–224. https://doi.org/10.1080/01419870.1990.9993669.

Morning, Ann. "The Racial Self-Identification of South Asians in the United States." *Journal of Ethnic and Migration Studies* 27, no. 1 (January 2001): 61–79. https://doi.org/10.1080/13691830125692.

Qian, Zhenchao, Sampson Lee Blair, and Stacey D. Ruf. "Asian American Interracial and Interethnic Marriages: Differences by Education and Nativity1." *International Migration Review* 35, no. 2 (2001): 557–86. https://doi.org/10.1111/j.1747-7379.2001.tb00029.x.

Qian, Zhenchao, and José A. Cobas. "Latinos' Mate Selection: National Origin, Racial, and Nativity Differences." *Social Science Research* 33, no. 2 (June 1, 2004): 225–47. https://doi.org/10.1016/S0049-089X(03)00055-3.

Qian, Zhenchao, Jennifer E. Glick, and Christie D. Batson. "Crossing Boundaries: Nativity, Ethnicity, and Mate Selection." *Demography* 49, no. 2 (May 2012): 651–75. https://doi.org/10.1007/s13524-012-0090-3.

Rodríguez, Clara E. Changing Race: Latinos, the Census, and the History of Ethnicity in the United States. NYU Press, 2000.

Rosenfeld, Michael J. "The Salience of Pan-National Hispanic and Asian Identities in U.S. Marriage Markets" 38, no. 2 (2001): 161–75.

Schachter, A. "Finding Common Ground? Indian Immigrants and Asian American Panethnicity." *Social Forces* 92, no. 4 (June 1, 2014): 1487–1512. https://doi.org/10.1093/sf/sou019.